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AMERICAN ARTISAN and Hardware Record

Vol. 79. No. 18.

620 SOUTH MICHIGAN AVENUE, CHICAGO, MAY 1, 1920.

\$2.00 Per Year.

A warm air heater wins preference only by performance. Therefore, the fact that the BEAVER ONE-PIPE WARM AIR HEATER has won great preference throughout the trade is convincing evidence of its greater heating ability and general goodness. By heating better, for a longer time, at a lower cost, the BEAVER ONE-PIPE WARM AIR HEATER has proved its superiority to thousands of users throughout the country.

BEAVER ONE-PIPE WARM AIR HEATER

"The One That Works So Well"

OUR procedure here at the DANVILLE FACTORY has always been inspired by the ambition to build a one-pipe warm air heater that would meet every demand for saving fuel, every requirement of warm air distribution, every need of perfect and healthful heating.

Our designers, our engineers and our workmen have been constant and loyal companions in the search for this ideal.

All of us together have felt that the results of our efforts must first satisfy ourselves, that a warm air heater which should bear the name **BEAVER** must pass repeatedly the most difficult tests.

We find now that, after use by thousands of people who have no reason to be prejudiced in its favor except as use has demonstrated its qualities, the **BEAVER ONE-PIPE WARM AIR HEATER** is even greater than we had at first supposed.

**THE BEAVER ONE-PIPE WARM AIR HEATER WILL
PROVE PROFITABLE FOR YOU TO SELL THIS SEASON**

Other dealers who are selling the **BEAVER ONE-PIPE WARM AIR HEATER** are having big sales and they are reporting that the demand is growing daily.

The **BEAVER ONE-PIPE WARM AIR HEATER** has many excellent features that you will at once notice from our detailed description.

Let us send you the full particulars now. Look over the details of construction and see why our dealers are satisfying their customers with the **BEAVER ONE-PIPE WARM AIR HEATER**.

Write today for our illustrated catalog.



DANVILLE STOVE & MFG. CO.

DANVILLE, PENNSYLVANIA

CHICAGO, ILL.

D. Sager, 330-340 North Water Street

PITTSBURGH, PA.

R. E. Edmunds, 104 Wood Street

Published Weekly. Entered as Second-Class Matter June 25 1885 at the Post Office at Chicago Illinois under Act of March 3rd 1879

ALPHABETICAL INDEX AND CLASSIFIED LIST OF ADVERTISERS, Pages 48 and 49

"WRIGHT" PIPELESS HEATERS MAKE FURNACE SALES EASY

There's plenty of warm air heater business awaiting you if you tell your prospects you sell the "Wright" line of pipeless heaters—the guaranteed pipeless system.

The Wright heater has extra large grills. The inner lining or casing is triple lined. Its special humidifier gives the warm air the proper amount of moisture. It gives the maximum heat at a fuel saving of from 25% to 35%.



We also manufacture the famous "Mahoning" heating system.

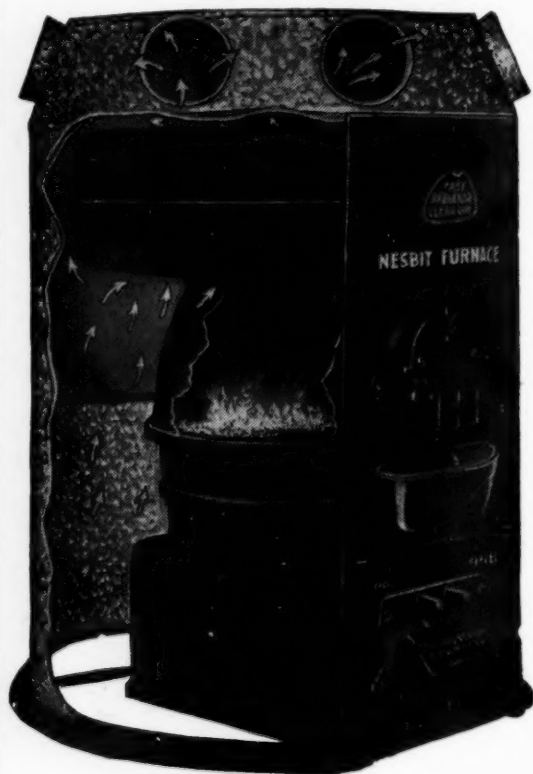
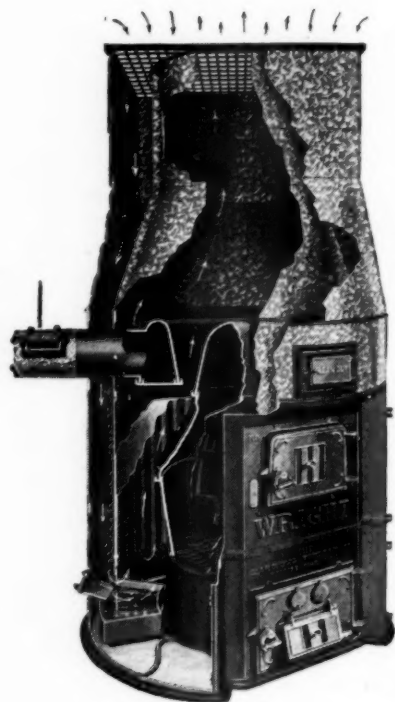
Write for illustrated literature and our attractive dealer's proposition.

THE MAHONING FOUNDRY CO.

622 Poland Ave.

YOUNGSTOWN, OHIO

A Mammoth Plant With a Mammoth Production



THE NEW IMPROVED NESBIT FURNACE

A remarkable heater, which burns equally well—either hard or soft coal, wood or lignite.

All Cast Iron, with very large radiator, high combustion chamber, large feed-door, and casings twice the diameter of the fire-pot.

The Nesbit 900 Series will satisfy you and your customers. Made in three sizes, either PIPE or PIPELESS. We will gladly send descriptive matter and prices.

"Quality and Service"

"Everything in Furnace Supplies"

STANDARD FURNACE & SUPPLY CO.

UNION STATION P. O.

OMAHA, NEBR.

ESTABLISHED 1880

Representative of

The Hardware, Stove,
Sheet Metal, and Warm
Air Heating and Venti-
lating Interests

PUBLISHED EVERY SATURDAY

AMERICAN ARTISAN and Hardware Record

Address all communications and
remittances to

DANIEL STERN

Publisher and Proprietor

620 South Michigan Avenue
Chicago, Illinois

TERMS OF SUBSCRIPTION IN THE UNITED STATES AND ITS POSSESSIONS (Invariably in Advance) ONE YEAR POSTAGE PAID \$2.00
FOREIGN COUNTRIES ONE YEAR POSTAGE PAID \$4.00 CANADA ONE YEAR POSTAGE PAID \$3.00

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CHICAGO, MAY 1, 1920.

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THE LATEST AVAILABLE report of the Comptroller of the Currency reveals the significant fact that bank deposits have declined almost one billion dollars. This reflects a turn in the financial and economic trend of the nation.

Deposits Decrease

After increasing in rapid ratio from the very beginning of the European War and practically doubling in six years, bank deposits began to decline in amount at the close of last year. In the opening months of 1920, the decrease was at the same high percentage. The explanation of the loss of deposits is not far to seek. Primarily it is due to a shrinkage of earnings by the people and a decrease in the total volume of production in the country. The strikes and other industrial disturbances had a considerable part to play in the total effect. Lessened deposits with lessened resources naturally connote curtailment of the credit resources of the country. The financial centers of America, which are always sensitive to changes of this kind, are showing results of disturbed conditions by the unusual high money rate.

The logical deduction from this condition of affairs seems to be the extreme likelihood of the slowing up of purchasing by the general public and a partial leveling of prices. It is believed by many experts that the cost of living has reached its peak, and is on a slow but sure decline through inability of the public to expand further individual credits. It is not probable, however, that this decline will reach levels much lower than those in effect at the beginning of the year. In practically all the chief industries raw materials have already been contracted for to cover next season's productive requirements. It is, therefore, almost a foregone conclusion that the price of next season's output will not be materially lower than those now prevailing except in cases where prices are out of all proportion to actual costs. In other words, any price declines which may come into effect as a result of the conditions referred to must necessarily be operative in that margin between legitimate selling prices and the usurious figures of profiteers.

ACCORDING TO THE familiar saying, "What is sauce for the goose is sauce for the gander." In

Farmers' Monopoly

more dignified phrase, there should be no distinction of persons in putting into effect the principles of justice. If powerful industrial monopolies are harmful in principle to the commercial welfare of the nation, combinations of farmers for purposes of monopoly are equally contrary to the spirit of American law. The underly-

ing purpose of government in a free democracy is to promote the well-being of all. The greatest good to the greatest number must necessarily be the dominating motive of all sound legislation. The Sherman Anti-Trust Law was devised for the purpose of keeping the avenues of commerce free and open to all legitimate enterprise. It has been popularly interpreted almost exclusively with reference to manufacturing corporations. It needs to be interpreted now with reference to new aggregations which threaten the people with harmful monopoly. During the war we were willing to guarantee high prices to the farmer for his wheat. The world needed wheat. The slogan everywhere was "Food Will Win the War." We were thoroughly convinced that underfed soldiers are poor fighters. We paid the farmers their price without a murmur. Our descendants will continue to pay in the form of taxation the remainder of the debt incurred by the people in holding up guaranteed prices for wheat for the farmer.

But the war is over. Prices are still high. In some lines they are getting higher every other day. There is an evil psychology at work of profiteering in many of the necessities of life. It spreads more subtly and rapidly than any plague which ever swept the world. Our only bulwark against this assault is in the enforcement of sound legislation. The farmers whom we willingly supported with guarantees for their products are now combining in what amounts to a trust. At the recent Annual Convention of the National Wheat Growers' Association, the delegates voted unanimously for the control of the cereal products of the nation. The plans approved by the convention are designed to eliminate the middleman. They provide for local cooperative organizations of cereal growers centering in cooperative marketing associations with headquarters in the market centers. District or terminal marketing associations, in turn, will be merged in a national marketing association. The district national organizations are to serve as channels through which all products of farms will reach the ultimate consumer. While ostensibly assuring the public that their purpose is to help reduce the high cost of living, in reality the combination is for the purpose of increasing the profits of the farmers. Fine words butter no parsnips—and protestations of good intention will not change the character and effect of such a powerful combination upon the welfare of the people.

The retail merchant is certain to be unfavorably affected by such a monopoly—for it amounts in the

long run to a monopoly of the food products of the country. The middleman is essential to the orderly distribution of commodities. If there were a better method of placing products in the hands of the consumer or a cheaper method for doing so, the middleman would long ago have disappeared from the marts of trade just as the ox-team and pony-express have given way to the railroad and the motor truck.

Public opinion makes law in the majority of cases. It is highly important, therefore, that public opinion be aroused to the menace of this new combination. Cooperation for the good of a trade or industry is legitimate and desirable when it does not trench upon the general rights of the people. Progress is made by cooperation but not by the sort of cooperation which is implied in the Cooperative Farmers' Association which is monopolistic in its tendencies. Retailers in districts where they must rely largely upon farmer trade may not feel free to express their opposition to the new movement. At least, however, they should study its dangers and, when they can do so without loss of customers, should take pains to point out its disadvantages. It is only one step from cooperative marketing of farm products to the cooperative buying of farm necessities. When the proposed monopoly reaches that stage of development the retailer—whose function is a necessary one in the distribution of goods—will find his list of customers dwindling and himself sweeping toward a verge of bankruptcy. It takes courage to object to such farmers' organizations as are formed in a manner which violates the spirit of the American principle of free commerce. The farmer has been coddled by the American people particularly during the war. Politicians add several degrees to the temperature of the atmosphere in fervent praise of the horny handed sons of toil who till our fields and charge us top prices for wheat and eggs. There is no denying that farmers as well as other groups of citizens have not always obtained perfect justice. But that is no reason why they should be permitted to organize a monopoly which is certain to work hardship upon the general public.

NATURALLY, THERE IS a great deal of uncertainty as to the most practical solution of our industrial troubles. What we need most of all is to get the people of the country to unite on a minimum of fundamental principles in dealing with the problem of labor and production. Recognizing the right of the public to a voice in the settlement of industrial disputes, the State of Kansas tried the experiment of an Industrial Court. As explained by the Honorable Henry J. Allen, Governor of Kansas, this Industrial Court is not a court of arbitration. It is a court of justice. In the make-up of its personnel it has no representative either of capital or of labor in the sense in which they apply to the controversies of labor. The Court represents the public in the function of Government.

There was an hour when there was no better way, apparently, for giving sanctification to property right than the right of might. The men who took what they could take and kept what they got had title.

Then society came along with the idea that there must be a readjustment of that situation and we established the civil courts. Surely, no man would today go back to the old process which protected property right. And now we have come to the day which teaches us the lesson that society has the same right to take jurisdiction over offenses committed against it in the name of industrial warfare that it had to take jurisdiction over recognized crime.

The Industrial Court of Kansas has the power, first, to investigate labor conditions. Just now in the mining district are two members of the Court, trying to figure out a proper relation between the cost of living and the cost of mining, and then the Court has the power either upon its own initiative or upon petition by either side of a controversy or upon the initiative of the Attorney General or upon the initiative of any ten citizens of the state to bring into Court any men from either side of this industry and issue orders touching working conditions, touching wages. It has the power to fix a minimum wage scale pending the settlement of a controversy and the settlement of a controversy when it has been arrived at in the Court is a final settlement with a Court order and all the dignity behind it of impartial, just Government.

"We do not take away from any man his right to quit work," says Governor Allen. "Government should not do that if it could, and so we do not seek to do that. And we recognize collective bargaining and legalize it and believe that that condition of industrial peace that is founded upon mutual understanding and mutual interest and mutual confidence is the finest basis of industrial peace, but when negotiation has failed, then the Court steps in and offers itself as a substitute for the strike and the lock-out and the picket and the black list and the boycott. We do not say that any man shall not quit work but we do say that if any man conspire with any other man to shorten the production of an essential industry, then that man has committed a misdemeanor or a felony, whichever class it falls into, and shall be prosecuted in the criminal courts of the state."

ADVERTISING PAYS. There is not much difference between this statement and the assertion that the earth revolves on its axis. Both are basic facts. There are some people who are not yet convinced of the fact that the earth turns on its axis. The proofs are so simple that the ordinary school boy can understand them without difficulty. Yet such folks profess to be skeptical and question the validity of the proofs. Similarly with advertising, there are people who refuse to give assent to the almost self-evident proposition that advertising pays. They put a small advertisement in some publication and get no returns. They think it's an advertisement when in fact it is merely a business card without any selling appeal. They bestow no thought upon the work of the advertisement. They give no consideration to the character, suitable or otherwise, of the medium in which it is printed. "Well," they say, "advertising doesn't pay." The truth is they did not advertise. What they thought was advertising was merely

The Kansas Experiment.

Brains and Advertising

space filling which is quite different from advertising. To get the most out of advertising it is essential that the copy be thoughtfully prepared with a view to the highest degree of persuasiveness so that sales may be effected through it.

RANDOM NOTES AND SKETCHES.

By Sidney Arnold.

I have the highest respect for scientists. But this morning I felt considerable resentment against the entire tribe of star-gazers and laboratory folk. They weren't satisfied with dividing matter into electrons so darn small that it would take several billion of them to make a respectable looking hen's egg. Now they're dividing matter into quantels—whatever in thunder that means—and the quantel is so blooming small that an electron is as big as a plumber's bill in comparison with it. The next thing we know snappy young advertising writers will be using the new word "quantel" to sell stoves, cravats, and warm air heaters. That's the reason I'm taking all this trouble to tell you all this in advance so you won't be surprised when you see it in the list of up-to-the-second new school advertising copy.

* * *

I would certainly hate to be mistaken as publicity promoter for the medical profession. Most of the doctors I know are clever and competent. Their patients advertise them. It's against the ethics of their craft to spend any money for publicity. Wherefore. I can not be charged with having ulterior motives of self-interest when I quote this paragraph from the bulletin of the Chicago Board of Health:

"When the machinery in your automobile begins to show signs of a breakdown and fails to work as it should, you send the car to the experts to be overhauled and put into good running order. Why not then, when heart, liver and kidneys are not functioning as you know they should, take your human machine around to the medical expert and have him look it over. In other words, go to the doctor while you can. Don't wait until he has to come to you, for it may then be too late for him to do more than just patch you up here and there; when, if you had gone to him sooner, he could probably have made you good as new. The trouble is too many people wait until, figuratively speaking, they are ready for the scrap heap. The doctor can't do any more with a human machine which is 'all shot to pieces,' than the skilled mechanic can with a battered up flivver that is ready for the scrap heap. Any kind of mechanism to be efficient and durable needs care, attention, and frequent overhauling. Don't neglect your machine."

* * *

Did it ever strike you that one speculator has to lose for another to win? Well, that's the way it looks to me. I can't see, therefore, that speculation has any permanent effect on prices. There has been lots of speculation in the last ten days or two weeks and Wall Street has had alternate chills and fever. The rest of us plain ordinary folks seem trotting along at about the same pace. Once in a while we have to make a quick jump when an auto-

mobile horn startles us out of our placidity. But on an average our rate of progress doesn't change very much. The speculators do not quicken our gait. Commerce goes along. Shops and factories turn out commodities. People laugh and dance and go to movie picture shows. But only a few bilious-minded people get excited about it all and toss around nights when they ought to be enjoying dreamless slumber. What's the use of worrying our heads about it? Just do the best we can and say a good cheery word where it is needed or where we fancy it is and about 99 per cent of the gloom and trouble will disappear like a fog before a June sun. We've got to make the trip all the way unless we are foolish enough to commit suicide. We are bound to live all the days of our life—and we can live those days joyously or sourly as we choose.

* * *

I should like to see every hardware merchant break away from stereotyped habits of writing in his advertisements. There are many ways to "freshen up" one's copy. The simplest way, of course, and often the hardest, is to write as you talk.

This is the time of the year to push the sale of garden tools and supplies. A good help to advertisements along this line is to use some of the clever garden maxims which are going the rounds just now. Try one or all of these:

Be sure you're right, then hoe ahead.

A hoe in the hand is worth two in the shed.

Spare the spade and spoil the soil.

Ground rightly prepared is half the battle.

Thrice armed is he who hath his garden planned.

Early to plant and early to hoe will cause your garden to blossom and grow.

* * *

There is no needful work in the world which is absolutely uninteresting. Even if you are doing the same thing every day, you can vary it by the use of your imagination. Some of the most beneficial inventions have been originated by men engaged in monotonous occupations. They used their brains to relieve the monotony. That fact is that monotony is subjective and, therefore, capable of change by the exercise of thought.

* * *

Opinion is divided as to the extent—if any—to which friendship may decently be used as a means of solace and comfort in times of worry or trouble. Here is a view to the effect that we should keep our griefs and heartaches to ourselves:

What's the Use of Kicking?

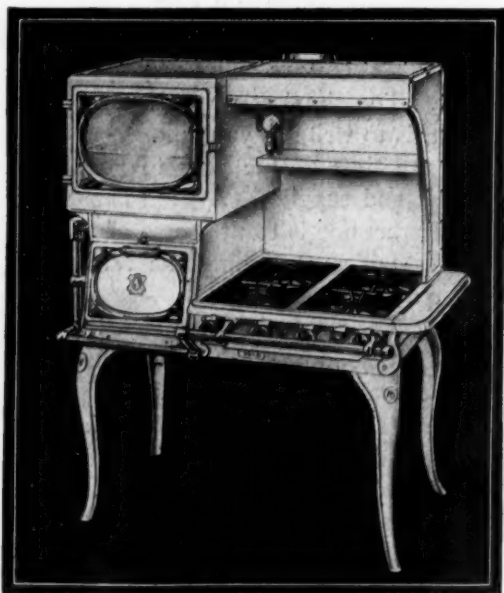
There ain't no use in kickin', friend,
When things don't come your way;
It does no good to holler round,
And grumble night an' day.
The thing to do is curb your grief,
Cut out yer little whine;
And when they ask you how you are,
Jest say "I'm feelin' fine."

Your heart may jest be bustin' with some
Real or fancied woe,
But when you smile the other folks
Ain't really apt to know.
The old world laughs at heartaches, friend,
Be they your own or mine;
So when they ask you how you are,
Jest say, "I'm feelin' fine."

UP TO THE MINUTE NEWS SIFTINGS

IS EASY TO SELL AND KEEP SOLD.

The best and purest chocolates, possessing the most tempting flavor, would not find ready sale if presented to the customer in shabby containers or wrapped up in butcher's brown paper with coarse twine. In other words, quality needs to be presented to the consumer in conjunction with pleasing ornament, form, or design. In a true sense, therefore, the combination of quality with beauty is the



Number 39 A-B White Enameled "Aristocrat" Gas Range, Manufactured by A-B Stove Company, Battle Creek, Michigan.

most efficacious means of presenting and selling to the consumer commodities which have the other, essential requisites of good merchandise. The A-B Stove Company, Battle Creek, Michigan, is so certain of the soundness of this philosophy of selling that it places the strongest stress upon pride of possession, in the arguments advanced in behalf of its "Aristocrat" line of gas ranges.

It is said that this line of gas ranges is not only easy to sell but easy to keep sold. The very essence of good merchandizing is in keeping commodities sold, that is, in giving satisfaction to the purchaser. Of course, this implies good, trustworthy commodities. When to the goodness and trustworthiness of a commodity is added the attractiveness of artistic appeal, profits are multiplied, because demand is thereby increased. The number 39 A-B white enameled "Aristocrat" gas range made by A-B Stove Company, Battle Creek, Michigan, shown in the accompanying illustration, is finished in smooth polished nickel and snow white porcelain without excessive ornamentation or other decorative design which would tend to decrease cleaning and sanitation. It has glass oven doors, and the ovens are lined with

aluminum-alloy, a metal which withstands the most severe heat and is permanently rust proof. These A-B gas ranges are equipped with a patented burner which is said to economize in the use of gas. Dealers who are intent upon building trade far ahead in their neighborhood would do well to get in communication with the A-B Stove Company, Battle Creek, Michigan, and ask for complete details and dealers' prices of the "Aristocrat" line of gas stoves.

TRADE-MARK FOR STOVES, HEATERS, AND RANGES IS REGISTERED.

United States Patent Office registration, under number 124,239, has been granted to Steiger and Kerr Stove and Foundry Company, San Francisco, California, for the trade-mark shown in the accompanying illustration. The particular description of goods to which the trade-mark applies is wood, coal, and combined wood or coal or gas stoves and ranges or heaters. The application for the registration of this trade-mark was filed October 27, 1919, and use is claimed for it since 1905.

OFFERS ADVICE ON SELLING STOVES.

An experienced dealer gives the following advice as the result of many years in the selling of stoves:

The buying of a stove or range is, for the average family, a serious, important problem. Few stoves are bought on the spur of the moment. There is long and earnest consideration and discussion beforehand. The hardware dealer who understands and appreciates this fact will appreciate, too, the wisdom of influencing the judgment of this prospective customer when that judgment is still in its formative state. Many are the instances where the general advertising of some firm of stove manufacturers or perhaps of some retail dealer has created, in the purchaser's mind, a strong prejudice in favor of some particular make of stove; so that, although the stove buyer tries to adopt an impartial attitude and to look over every make, he in the end returns satisfied to the make of stove which first interested him.

It pays to advertise a little ahead of the season, if for no other reason because, as a rule, the problem is earnestly discussed in the average family long before the dealer is actually approached. In many instances the purchase is put off from season to season until it can be no longer postponed; and there are very few instances where it is not talked over weeks and months ahead.

Every merchant has, or should have, if only on the tablets of his memory, a list of prospective stove purchasers whom he has failed to land in previous

seasons. Now is the time to look over this list and get busy. Send along a letter discussing the stove question; back it up with advertising literature. In this letter, as in your newspaper advertising, talk as though you had a very difficult customer on the other side of the counter whom it was absolutely necessary to convince. Or, if you should meet one or other of these prospects, don't be bashful about opening the stove question.

Wherever possible the hardware dealer should try to systematize his "stove prospecting," not merely contenting himself with the present campaign, but looking ahead to future seasons. Thus, he should form the mental habit of "spotting" a prospect instantly. Thus, an acquaintance or perhaps a clerk may remark, casually, that Miss So-and-So is to be married next month. To one merchant this remark would convey no idea beyond the bare fact stated. Another merchant, self-trained to mental alertness, would instantly say to himself: "Here's a stove prospect." And, as a result, he would secure the name of the prospective groom, and commence at once to hustle for the order. Or perhaps a new family is moving to town. There, perhaps, is another chance for an order. Merchants should train themselves and their clerks to watch for these very helpful hints.

Stove prospects secured in this and other ways should be systematically listed; and, if orders are not secured immediately, these lists will furnish material on which to work for future orders.

One hardwareman who pushes his stove business energetically makes it a practice, before the season opens, to have a representative of the stove firm hold a conference with his selling staff. In the course of his conference, the stove is demonstrated, so far as possible; every "talking point" is thoroughly explained; explanations are given also of the talking points of competing stoves. Later, the merchant holds conferences with his staff, not all together, but with each. This process takes less time than would appear; and the result is that the staff is pretty well posted before the first purchaser of the season looms on the business horizon.

Where this scheme can not be carried out, it is still possible for the salesman to secure a great deal of valuable information by studying the catalogues of his own and competing lines, and by reading their advertisements. All stoves have talking points peculiarly their own, which it is customary to feature; and with these the salesman should be thoroughly acquainted. As a rule, these special features are less important than they seem; but they help to sell a thoroughly good stove.

The salesman should remember that, in practically every instance, the customer has pondered the problem of stove purchasing for a long time. He is not buying on the spur of the moment. Probably he comes to the store with preconceived ideas. The shrewd salesman, far from monopolizing the conversation, will rather endeavor to draw the customer out, and to that end will let the customer do the greater part of the talking. To induce the customer to express himself, to get him to ask questions, and

then to adapt your line of argument to the prejudices and preferences disclosed, is the part of good salesmanship.

OBITUARY.

Walter S. Stevenson.

A useful life, rich in service to others, was terminated in the passing away of Walter S. Stevenson, president of the Thomas, Roberts and Stevenson Stove Works, Philadelphia, Pennsylvania, who died Wednesday, April 21, 1920, at his home, 6332 Drexel Road, Overbrook, a suburb of Philadelphia. He was widely and favorably known throughout the trade because of his earnest work in promoting the welfare of the National Association of Stove Manufacturers, of



which he was treasurer for many years. He was noted for the accuracy and soundness of his judgment in business affairs as well as for a high sense of justice in all his dealings. His firmness of character was tempered with a kindness which attracted and held to him hosts of friends during his long career in the trade. Several years ago he retired from active participation in the business of the Thomas, Roberts and Stevenson Stove Works, but continued to retain the presidency of the company. He is survived by his wife and one daughter, Mrs. W. W. Hammond of Wynnefeld, Pennsylvania.

Mrs. William Gold Hibbard.

After a long life of kindly deeds, Mrs. William Gold Hibbard, widow of the founder of Hibbard, Spencer, Bartlett and Company of Chicago, Illinois, passed away April 25, 1920, at her residence, 1701 Prairie Avenue, Chicago, Illinois. She was 85 years of age. Three daughters and one son survive her. They are Mrs. Robert B. Gregory, Mrs. John Buckingham, Mrs. William E. Casselberry, and Frank Hibbard. She dispensed the bulk of her estate in charities during her lifetime, saying: "I want to have descendants, not heirs."

THE WEEK'S HARDWARE RECORD

Of Interest to Manufacturer, Jobber and Retailer

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 42 to 47 inclusive.

The Quality Hardware Company has been incorporated at Bloomington, Indiana, with a capital of \$400,000. Incorporators are: J. R. McDaniels, John S. Curry, and O. E. Hood.

West Side Furniture and Hardware Company has been incorporated at Huntington, West Virginia, with a capital of \$50,000. Incorporators are: W. E. Kimball, E. G. Paul, Hattie A. Paul, J. H. Baird.

Platte County Hardware Company has been incorporated at Dearborn, Missouri, with a capital of \$60,000. Incorporators are: F. Y. Dake, W. P. Harrington, W. H. Gabbert, W. A. Booley, W. S. Hernon.

McCabe-Boehm Hardware Company, jobbers and retailers of hardware, Petoskey, Michigan, has been incorporated with a capital of \$70,000. Incorporators are George W. McCabe, Henry Boehm, Mate C. Graham, and others.

OUTLINES SESSIONS OF THE COMING CONVENTION OF THE AMERICAN HARDWARE MANUFACTURERS.

A general outline of the program of the session of the forthcoming convention of the American Hardware Manufacturers' Association, to be held May 11, 12, 13, and 14, 1920, in the Marlborough-Blenheim Hotel, Atlantic City, New Jersey, is given as follows in the April bulletin of the organization:

Although the forthcoming convention is what we term our semi-annual meeting, the Southern Hardware Jobbers' Association's convention is their annual meeting, and this fact brings a record attendance of jobbers of the South.

The important point to be considered by our manufacturers is that the Southern jobbers are approaching us just now, not with indefinite or hazy plans but with specific problems, the solution of which means everything to them for the proper planning of business.

A time has come when circumstances have placed responsibilities upon the manufacturer that can not be evaded; it is a time when certain conditions must be faced in a man-to-man fashion if we would avoid industrial disaster. The great question of supply and demand must be analyzed—the distributor must have confidential facts from the manufacturer. A perfect understanding must exist between all interests in our industry in order that business may proceed under control.

To the manufacturer who has not had time to give

thought to present conditions that affect the distributor and consumer, and hesitates as to attending the convention, we would earnestly urge that he decide to have a representative at the convention who is qualified frankly to place before inquiring distributors the difficulties with which the manufacturer of his particular product is confronted. That our manufacturers as a class realize this necessity is indicated by the unusually large number of reservations for hotel accommodations.

To give opportunity for the many conferences between manufacturers and jobbers that present problems would indicate to be desirable, executive and joint sessions during the convention will be held only in the mornings, so that each afternoon may be utilized for these conferences.

On Tuesday morning, May 11, the joint session of the Southern Hardware Jobbers' Association and the American Hardware Manufacturers' Association will be held in the Blenheim ball room. Speakers of national fame will give us valuable facts on the broad questions of the day. This will be a session for big things—petty affairs and relatively unimportant matters will not occupy our time.

Inspirational addresses will be made by the Hon. John J. Cornwell, and the Hon. Carter Glass, and an address that will clarify thought upon the relationship between manufacturer and jobber with regard to distribution will be given by a man who has had equal and long experience as a jobber and a manufacturer.

Presidents King and Payne will address the session, touching upon the big questions that specifically tend to help or harm our industry.

In the evening an informal dance in the Blenheim ball room will be given in connection with a reception. This reception by the officers of both associations will be a get-together time—a time to renew old acquaintances and a time to make new friends.

On Wednesday morning each association will hold its first executive session. President Payne will address our session and the chairmen of the various committees will report progress for the first six months of their work. Mr. Fayette R. Plumb will address us upon "Excess Profits Tax." This will be a very interesting session.

An unusual entertainment, which we have termed a "Theatre Frolic," will be given in the evening. Fun and laughter will drive dull care away.

On Thursday morning we hold another joint executive session with the Southern Hardware Jobbers' Association, in which the specific problems between manufacturers and jobbers will be discussed and a line of action indicated. Hon. William B. Colver, Federal Trade Commissioner, will address us and tell us as to the Government's attitude towards

the questions which we will discuss prior to his address. These questions are: (1) "Cost of Distribution and Cost of Production," (2) "Price Guarantees," (3) "Full Weights, Full Counts, Full Measures."

Following this we will be addressed by Mr. Norman Sharp, of the Crumley-Sharp Hardware Company. His subject will be "Increased Differentials Manufacturers Should Allow." It is our belief that no manufacturer can afford to absent himself from this session.

At 9:30 p. m. we will hold a ball in the Blenheim ball room. It will be held by five musicians who dispense snappy music to New York's "400."

GUEST OF CHICAGO HARDWARE CLUB TELLS NEED OF EDUCATION AND TRAINING IN INDUSTRY.

That no man is too old to acquire new knowledge for the betterment of his work is the statement made by Charles A. Miller, Jr., a recent guest of the Hardware Club of Chicago, during an informal talk in the Club Rooms of the organization, State and Lake Building, Lake and State Streets, Chicago, Illinois. He declared that the development of men, young and old, can be accomplished readily by correspondence instruction.

"In fact," he maintained, "this is about the only method by which men in an established position can advance or even keep up with other men in their line. The man who fails to develop and use all his faculties is in the position of a wrestler with one arm tied behind him."

Mr. Miller speaks from practical experience as he is at present associated with the Department of Architecture of one of the leading correspondence schools of America. He was for a long time managing editor of the National Builder, and later was editor of Cement Era. He cited a number of instances of business men who were improving their spare time by following courses in matters pertaining to their industry.

OBTAINS OFFICIAL REGISTRATION FOR SAW TRADE-MARK.

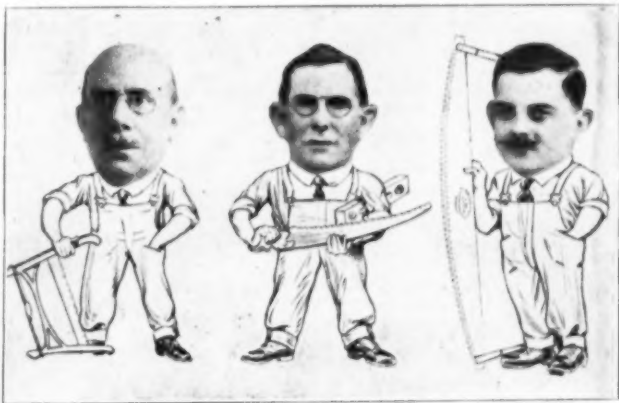
The advertising value of the trade-mark is intensified when it serves not only to identify a particular commodity, but at the same time to convey an idea of some particular characteristic either of the service rendered by the commodity or the manner in which the commodity is manufactured or operates. In the case of the trade-mark depicted in the accompanying illustration, a description of the method of grinding saws is embodied in the trade-mark which under number 127,403, has been granted United States Patent Office registration in favor of the Simonds Manufacturing Company, Fitchburg, Massachusetts. Use of this trade-mark is claimed by the Simonds Manufacturing Company, since February, 1884, in connection with saws. Thirty-six years are certainly an ample period, during

which to establish the significance of the trade-mark of this description. That it has become more widely known with the passing of time is a reasonable proof of the sound policy of the Simonds Manufacturing Company in matching promise with performance in the production of dependable saws.

WILL HAVE CHARGE OF THE HENRY DISSTON AND SONS' DISPLAY AT ATLANTA, GEORGIA.

Booth Number 60 at the Auditorium Armory, Atlanta, Georgia, will be occupied during the Convention of the Southern Retail Hardware and Implement Association, May 4, 5, 6, and 7, 1920, by Henry Disston and Sons, Incorporated, with an attractive display of saws, files, and tools.

The Disston exhibit will consist of a number of display boards on which will be arranged saws of all kinds, files, and a representative assortment of Disston tools. A feature of the exhibition will be a special "shadow-box" in which will be displayed the famous Disston "D-8" hand saw.



Messrs. Sisson, Query, and Ziegler, Sales Representatives of Henry Disston and Sons, Incorporated, Philadelphia, Pennsylvania.

During the Convention there will also be displayed, in a prominent store window, on Peachtree Street, Atlanta, Georgia, a very unusual Disston Saw. The handle of this saw is made of mahogany taken from an aeroplane propeller picked up on the battlefield near Ypres in Flanders; the screws are brass, nickel plated, made from shells used on the "Front" at Chateau-Thierry; the blade is a standard D-115 Disston-Made-Steel Blade.

The Disston booth will be under the direction of Messrs. Sisson, Query, and Ziegler, all Disston men, well known to the Southern trade. Mr. Sisson for the past few years has been calling on the Southern jobbers, while Messrs. Query and Ziegler are in direct touch with retailers in that section of the country.

ISSUES AN ILLUSTRATED CALENDAR.

A useful calendar, beginning with the month of April, 1920, has been issued by the Loudon Machinery Company of Fairfield, Iowa. It measures 40x20 inches. The upper two-thirds of the space is used to show more than 50 illustrations of various labor-saving barn equipment devices made by the Loudon Machinery Company.

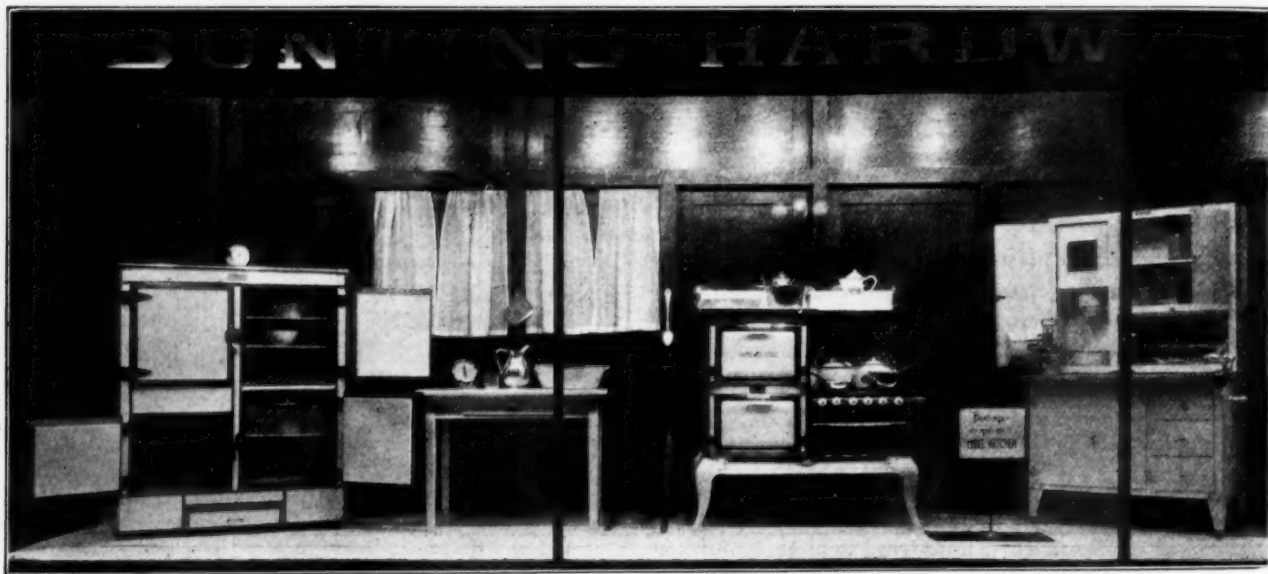
CRESCENT GROUND
127,403.

EXHIBITS IN AMERICAN ARTISAN WINDOW DISPLAY CONTEST

KITCHEN EXHIBIT GAINS A SPECIAL HONORABLE MENTION IN WINDOW DISPLAY COMPETITION.

It takes more than ordinary cleverness to design a display of the nature of the one shown in the accompanying illustration and at the same time give it selling attractiveness. As will be seen, the exhibit presents the main contents of a modern kitchen, even to the blue and white lawn curtains which add the necessary touch of homelike reality to the display. The floor covering is wall paper of blue and white

should be. Thus, they make comparisons between this kitchen shown them by the Bunting Hardware Company and the one in their own homes. In every case in which the differences brought to mind by the comparison are in favor of the kitchen shown in the window display, they feel the natural impulse to supply what is lacking. The consequence of this influence upon them is that they are favorably disposed toward a purchase of the things needed to bring their own kitchen equipment up to the standard. If, therefore, they enter the store under the persuasion of such a display, they are most likely to make pur-



Window Exhibit of Kitchen Equipment Awarded Special Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. Arranged by Otto J. Gress for Bunting Hardware Company, 810-12-14 Walnut Street, Kansas City, Missouri.

tile effect. It will be noted that this window is not crowded with a multiplicity of articles. The attention of the passer-by is arrested by the strong two-color effect of the white and blue—the white and blue of the refrigerator and gas range and the ivory white of the kitchen cabinet and kitchen table. Evidently the purpose of this display was not to sell a particular commodity but to suggest an adequate, sanitary, neat and pleasing kitchen equipment.

Instead, therefore, of creating desire in the brain of the observer for some single kitchen utensil or group of kitchen articles, the effect of this exhibit is to cause the prospective customer to compare his or her kitchen at home with the model thus presented in the window. This may be described as educational publicity with reference to the modern kitchen supplies carried in stock by the Bunting Hardware Company. People who see this display and who perceive the conveniences and pleasing appearance of such a kitchen are favorably impressed. More or less unconsciously they acquire a standard or model of what an up-to-date serviceable kitchen

chases of the things which they feel to be deficient in their own equipment.

Of course, it is quite evident that window displays of this character need what might be called follow-up displays, just as a good sales letter needs follow-up letters. The general impression must be localized and specialized through the medium of later window displays of particular kitchen utensils. Thus it would be advisable to follow this display with a display devoted exclusively to kitchen stoves and ranges. The latter, in turn, would advantageously be succeeded by an exhibit of cooking utensils, of refrigerators or kitchen cabinets, etc. It goes without saying that only articles of the highest quality, with very well known and thoroughly reliable trade-marks, should be featured in these displays. The window display which does not sell satisfaction with the goods is a waste of time and labor. The window display under discussion is reported to have drawn much attention and induced many new customers to enter the store. Profitable sales resulted and additions were made to the store's patronage.

PROGRAM OF COMING CONVENTION OF THE SOUTHERN HARDWARE JOBBER'S ASSOCIATION.

The utmost obtainable benefits are to be derived from the forthcoming convention of the Southern Hardware Jobbers' Association, which is to be held May 11, 12, 13, and 14, 1920, in the Marlborough-Blenheim Hotel, Atlantic City, New Jersey. Great pains have been taken in the preparation of an exceptionally instructive program for the sessions. Two of the sessions are to be in the nature of joint executive meetings of the Southern Hardware Jobbers' Association and the American Hardware Manufacturers' Association. The program in full is as follows:

Program of the Thirtieth Annual Convention of the Southern Hardware Jobbers' Association to Be Held May 11, 12, 13 and 14, 1920, in the Marlborough-Blenheim Hotel, Atlantic City, New Jersey.

Morning Session, Tuesday, May 11th, 10 o'clock.

Joint Executive Session American Hardware Manufacturers' Association and Southern Hardware Jobbers' Association, Blenheim Ball Room.

Meeting called to order, President George E. King.

Invocation.

Address by Senator Carter Glass.

Address by Hon. John J. Cornwell, Governor of West Virginia.

Address by George E. King, President Southern Hardware Jobbers' Association.

Address by Major Frederick H. Payne, President American Hardware Manufacturers' Association.

Address by Isaac Black, New Britain, Connecticut.

Afternoon Session, Tuesday, May 11th, 2:30 p. m.

(Executive for Jobbers only.)

Meeting called to order promptly at 2:30 o'clock in the Banquet Room of Blenheim.

Roll call.

Annual address of the President.

Annual report of the Secretary-Treasurer.

Report of Executive Committee.

Report of Supply Committee.

Report of Metal Committee.

Report of Transportation Committee.

Report of Axe Committee.

Report of Ammunition Committee.

Report of Steel Shape Committee.

Report of Steel Goods Committee.

Report of Scovil Hoe Committee.

Appointment of Special Committees.

All delegates are requested to attend Executive Sessions, and remain in Convention Hall until adjournment.

Tuesday Evening Entertainment.

Informal reception and dance.

Morning Session, Wednesday, May 12th, 10:00 o'clock.

(Executive for Jobbers only.)

Meeting called to order promptly at 10:00 o'clock in the Banquet Room of Blenheim.

"Screen Door and Window Situation," by W. D. Biggers, Secretary and General Manager The Continental Company, Detroit, Michigan.

"Nail and Wire Situation."

"Recent Developments and their Influence on the Methods of Distributing Hardware," by Wallace D. Simmons, President Simmons Hardware Company, St. Louis, Missouri.

"Axe Situation," by W. C. Kelly, President, Kelly Axe Manufacturing Company, Charleston, West Virginia.

"Chain Situation," by C. M. Power, Vice-President and Sales Manager United States Chain and Forging Company, Pittsburgh, Pennsylvania.

Discussion of the Executive Committee's and other reports.

No Afternoon Session.

Wednesday Evening Entertainment.

Theatre Frolic.

Joint Session, Thursday, May 13th, 10:00 o'clock.

(Joint Executive Session of Manufacturers and Jobbers.)

Meeting called to order promptly at 10:00 o'clock in the Banquet Room of Blenheim.

General discussion of cost of production and cost of distribution.

General discussion—Full Weights, Full Counts and Full Measures.

General discussion of Price Guarantees.
Address, "The Federal Trade Commission and Business," by W. B. Colver, Federal Trade Commission, Washington, D. C.

Address, "Increased Differentials Manufacturers Should Allow," by Norman Sharp, Crumley-Sharp Hardware Company, Atlanta Georgia.

No Afternoon Session.

Thursday Evening, Entertainment.

Ball—Blenheim Ball Room.

Morning Session, Friday, May 14th, 10:00 o'clock.

(Executive for Jobbers only.)

Meeting called to order promptly at 10:00 o'clock in the Banquet Room of Blenheim.

Unfinished business.

Report of special committees.

Election of officers.

Discussion of next place for annual convention.

HAS TRADE-MARK REGISTERED.

In the accompanying illustration is shown the trade-mark of the Napier Saw Works, Incorporated,



Springfield, Massachusetts, for which United States Patent Office registration has been granted under

number 127,767. The particular description of goods to which this trade-mark applies is saws and saw frames, and metal cutting band saw machines. The Napier Saw Works claim use of this trade-mark since November, 1919.

HARDWARE CLUB OF CHICAGO WANTS BIG ATTENDANCE OF MEMBERS AT ANNIVERSARY DINNER.

The Entertainment Committee of the Hardware Club of Chicago, consisting of John S. Kandy and Henry H. Squibbs, wants to hear promptly from every member of the organization with regard to the anniversary dinner which is to be held in the club rooms, State and Lake Building, Lake and State Streets, Chicago, Illinois, Tuesday evening, May 4, 1920, at 6:30 o'clock. The Committee declares that satisfactory arrangements for the dinner can not be made unless approximately the number of those who are to attend is known in advance. Consequently the Committee asks members to make their reservations at once. A very special dinner is promised and a particular treat with all professional musical numbers.

GETS TRADE-MARK REGISTERED.

Under number 124,185, United States Patent Office registration has been granted to the Nineteen

Hundred Washer Company, Binghamton, New York, for the trade-mark shown in the accompanying illustration. The particular description of goods to which the trade-mark applies is clothes washing machine. The Company claims use of this trade-mark since Oc-



tober 10, 1919. This trade-mark is sufficiently whimsical to attract and hold attention as well as to be remembered with ease. It is highly unconventional and not likely to be confused with other trade-marks used in connection with the same kind of commodities.

POINTS OUT PROFITS TO BE MADE FROM BOOSTING THE CLEAN UP AND PAINT UP CAMPAIGN.

Written by Victor Lauriston for AMERICAN ARTISAN AND HARDWARE RECORD.

The man who starts an important and popular civic movement thereby instantly stamps himself as a community leader.

"There's a public spirited citizen," people tell one another.

The prestige thus attaching to the individual extends also to his business. For the business, it is a mighty good advertisement. It means more sales and more profits.

Paint Up Campaign. Not merely has it meant added business for the exclusive paint dealers, but it has brought more trade to lumber dealers, hardware dealers, druggists, general merchants and many others.

Experience has taught these merchants that the Clean Up and Paint Up Campaign is a business builder from the drop of the hat.

More than that, the campaign means bigger profits. A larger trade is handled with practically the same overhead. The same salesman can put out twice the amount of goods; because, instead of the dealer having to seek the demand, the demand seeks the dealer.

Here are some of the lines for which the Clean Up



Cartoon Used to Boost the Clean Up and Paint Up Campaign.

The Clean Up and Paint Up Campaign is perhaps the most popular civic movement of the last decade.

Wherever it has been launched, it has swept forward to triumphant success. It has done a vast amount of good, through teaching, in thousands of American communities, the high ideals of cleanliness and sanitation and civic beauty.

It is bigger than a mere paint-selling proposition, this Campaign; but incidentally it is a big factor in stimulating paint sales. More than that, it helps to sell scores of "clean up" lines.

From the Atlantic to the Pacific, from the Gulf of Mexico to the 49th parallel, and past that, into Canada—yes, and from the far ends of the earth—reports have come of the success of the Clean Up and

and Paint Up Campaign creates a bigger demand:

Paints, oils and varnishes—of course. Then, plate and window glass; wall paper and decorating; building materials, lumber, builders' hardware and carpentry; garden tools, lawn mowers, fencing, seeds, plants, trees, flowers, shrubs, porch and lawn furniture; mops, brushes, brooms, sponges, fly-swatters, sweepers, vacuum cleaners; floor waxes, stains and polishes; awnings, shades and curtains; soaps, cleaners, paint removers, disinfectants, insecticides; garbage cans, trash burners, and ash cans; step ladders, garden hose, bath room appliances, plumbing; auto finishes and painting.

The list could be extended to far greater length; but these items will give some idea of the widespread

stimulus which the Clean Up and Paint Up Campaign has proved to trade generally.

The increase in sales will vary, of course, according to the community and the length of the campaign. In some instances the increases reported amount to fully 100 per cent, or even better. Quite a few dealers report 200 per cent increase. "At least 300 per cent increase," is one report.

The fact is, however, singularly significant that the reports uniformly speak of increases.

Apart from the increases in gross business, profits are also better. More than that, a solid foundation is laid for new business. The community is educated to the value of cleanliness and sanitation; and, incidentally, to the value of fresh paint and of scores of other "clean up" lines that help to make the home surroundings more cleanly, healthful, and attractive.

The importance of educating the public upon these points does not need to be emphasized. Paint dealers in particular know how important paint education is as a preliminary to making sales.

In the paint business, few sales are made without a great deal of preparatory, educative work. The average paint prospect has just one desire: to put off painting till the last possible moment. He has to be educated to the point where he will realize the necessity for early painting; and if he can be convinced of the importance of *regular* painting, so much the better for the paint dealer's future business.

It's a pretty stiff proposition for the individual dealer to undertake to educate an entire community along these lines. He can reach part of the community all the time, and all the community all the time—but it takes a comprehensive, far-reaching civic movement like the Clean Up and Paint Up Campaign to reach all the community all the time.

The Clean Up and Paint Up Campaign enlists the citizenship of the entire community in a movement of vital importance. It awakens the community spirit latent in every American town or city. Not merely is the citizenship of your community lined up for united action; but your town feels the contagious impulse of the nation-wide movement in which other towns and cities are united in the cause of civic betterment.

The campaign educates the entire community to the value and importance of cleanliness; and in so doing educates the individual in regard to clean up lines—and, especially, fresh paint.

The earlier the campaign is launched, the more effective it will be, and the greater the profits and the prestige accruing to the paint dealer. Full particulars as to how to start a Clean Up and Paint Up Campaign can be secured free of charge from the National Clean Up and Paint Up Campaign Bureau, St. Louis, Missouri.

WANTS NAME OF MANUFACTURER OF NORTHWESTERN INCUBATOR.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

We would like to know who manufactures the Northwestern incubator.

JOHNSON AND GINTHARDT.

Sheffield, Illinois, April 26, 1920.

GIVES REASONS FOR THE PRACTICE OF THRIFT BY BUSINESS MEN AND THEIR EMPLOYEES.

It is only natural that there should be a great diversity of opinion with regard to solutions for our most pressing economic problems among the vast number of persons who constitute our nation. But there are certain rock-bottom facts and arguments which are needed as a basis for right thinking and effective action in the matter. That is why it is beneficial to reproduce herewith the main parts of the address on this subject delivered before the recent annual convention of the Ohio Hardware Association in Columbus, Ohio, by Orrin Lester, Associate Director, Savings Division, Treasury Department, Washington, D. C.:

Address by Orrin Lester, Associate Director, Savings Division, Treasury Department, Before the Ohio Hardware Association, Cincinnati, Ohio, February 24, 1920.

The recent war was the most expensive experience of any character, and certainly the greatest tragedy, through which the world has ever passed. It cost \$186,000,000,000 in money, billions of dollars' worth of property, eight million of the world's best sons, untold wrecked homes and broken hearts.

Since 1913 the national debt of England has been increased from \$3,485,818,000 to \$40,000,000,000; of Italy from \$2,921,153,000 to \$15,000,000,000; of France from \$6,346,129,000 to \$35,000,000,000; of Germany from \$1,194,052,000 to \$50,000,000,000; of the United States from \$2,926,434,343.66 to \$26,600,000,000, and it is not as though these billions had been invested in some profitable enterprise; on the contrary, most of this expenditure has been shot into the air and everlastingly destroyed.

Currency and Credit Greatly Increased.

To meet the unusual demands for material during the war, the world's currency and credit were greatly increased. Within five years, the paper money in the fifteen principal countries of the world exclusive of the Bolshevik regime in Russia was increased from \$8,000,000,000 to \$44,000,000,000. Since this paper money was increased chiefly to produce goods which were destroyed in the war, money became plentiful and goods became scarce. It is an economic law that when currency and credit increase faster than production, prices go up. That is what we mean by inflation.

Furthermore, such an amount of paper could not be backed by gold, because this \$36,000,000,000 increase in the world's currency, as has been pointed out by the Literary Digest, is more than all the gold and all the silver that has been produced by all the miners of the world since America was discovered 428 years ago.

Currency of United States Not Endangered.

The currency of the United States, however, has not been endangered to the slightest degree through the increase of paper money over our gold reserve, because in the first place, our inflation is slight in comparison with that of European countries; second, our industrial development has not been greatly retarded; and third, our currency issued through the Federal Reserve Banks is backed and protected by resources and industries as stable as gold and as safe.

On the other hand, industrial development has been greatly handicapped in Europe because of the ravages of war; she lacks both capital and manpower in getting back to normal production; hence, her currency is not backed by large reserves of either gold or resources. In the face of these conditions, there is nothing very mysterious about the low rate of exchange between the United States and the nations of Europe.

We shall probably never be able to increase the gold reserve in any of the principal countries of the world as fast as we must increase the currency. As a matter of fact, the production of gold through several centuries has, to a certain extent, been standardized. In the absence of sufficient gold, the only substitute for gold in a nation's reserve is the industry and thrift of the people—their ability to produce and save.

The Responsibility of the People.

There is one thing we can not get away from, that is, that the final settlement of the bills of the great war and the reestablishment of the world's economic equilibrium is

the responsibility of the people. Whatever one nation may do toward helping another nation meet its immediate obligations, each nation must ultimately settle its own bills, and it can do that only by the production of new capital through individual and collective saving, and by intelligent use of those savings.

Dwight W. Morrow, speaking before the International Trade Commission at Atlantic City on the world's economic condition and America's responsibility toward that condition, said, "The first question is fundamentally one of the people's ability to produce and save. The central figure is not the manufacturer as such, nor the producer of raw materials as such, nor the banker as such, but the man who saves. While there will be many minor actors in the great enterprise, the hero of enterprise will be the plain, old-fashioned man who spends less than he produces and thus creates the fund without which all of the plans for the restoration of Europe must come to naught. He may be rich or he may be poor. He may be a banker or a merchant, or a school teacher, or a wage-earner. *But he must be a saver.* For it will be true in the future, as it has been in the past, that there is only one way for the capital fund to increase, and that is by the accumulation of savings."

We won the war, so far as those of us were concerned who were not in the service, by the application of a very simple prescription, which the Federal Reserve Board has stated in three simple words, "Work and Save." The importance of applying this prescription today is no less than it was during the stress of war.

Only One Way to Pay the Bills of War.

There is only one way to finally pay the bills of the great war, that is to produce and save the wealth; only one way to establish a proper proportion between credit and production, that is to increase production; only one way to work out the great economic problems which the war has left, that is to continue to apply this simple prescription of intensive work and systematic saving.

Work Is Only Method of Producing Goods.

The world has never yet found any method of producing goods except by work, and we shall never be able to increase our production by trying to find a substitute for work. The great industrial questions, including the question of wages, will never be settled right in any country until we make the slogan of industry, "Honest work for honest pay and honest pay for honest work."

Everyone respects the great mass of people of any nation who work with their hands. The contribution of the working forces, the carpenter who built the ships, the steel worker who moulded the bullets, the mechanic who forged the cannon, the textile worker who made the clothes, the farmer who raised the food, the miner who produced the fuel was as great a contribution toward winning the war as firing bullets at the front. We hope that no individual or group will spoil that great record in production by retarding their work now when humanity most needs their service.

Something Besides a Living.

A business man said a few days ago, that he was looking forward to the day when every man, woman and child in this country who works for a living may get from their labor a living and something besides. And may we hope, when that time comes, that every man, woman and child who works shall have such an attitude toward their work that they shall know how to live and use the "something besides." For I am inclined to think that if we knew more about how to live and how to use money, more of us would have something besides the living. That phrase, "the living and something besides," presents the great economic problem of the individual and of the nation, for the economic strength of a nation depends upon the economic habits of her people, upon how sanely they live and use the pay check.

I know of no greater contribution that parents could make to their children than to help them work out some method whereby they may earn money by honest work, save a margin and invest it intelligently. These are practical lessons in the simple principles of industry and sound finance which every young man and young woman need.

If every youth when he leaves the school to enter his life's career could have a thousand dollars to the good, earned by honest work, his financial success would be pretty well assured. The first thousand dollars is the hardest thousand to earn, it is also the hardest thousand to save, but if properly used it means more than any other thousand in the permanent accounts of life and fortune.

If every workman owned his home, held some government bonds, had a little bank account and was active in the municipal and social affairs of the community, strikes and labor turnover would be reduced to a minimum and Bolshevism would die.

How Business Men Can Help.

I can think of no greater contribution that a business man could make to his business, to his employees, to his community, or to his nation than to organize his working

forces into small groups to discuss and to apply the simple principles of economics and of sound finance, to create in their minds a greater sentiment for economy and the practice of saving money. It would pay a firm to spend some time and some money providing facilities for the practical application of these principles. We do not believe that earning and saving money for the mere sake of having the money is the most important thing in life or most to be desired, and certainly any tendency toward stinginess is to be utterly condemned. It is not to sacrifice, but to save; not to refuse to spend, but to spend carefully; not to restrict the pleasures of life, but to enlarge our independence. There is nothing which develops our influence and enlarges our independence more than a little money saved from honest work and invested safely. Until one has removed his financial shackles and has a little money to the good one cannot rise to the full advantages of a citizen. He lacks confidence to accept responsibility. He lacks courage to plan for the future. He lacks means to take advantage of opportunity.

Group Conferences Between Workers and Employers.

I have little hope of settling the great questions of industry and of bringing about a complete understanding between employers and employees in this country or in any country through great national conferences of workmen or of employers or of both of these groups combined. But I have hope of concrete results when well-meaning employers and employees sit down in their own places of business and talk over their personal economic problems. There can be no national industrial problem except as the cause for that problem exists in every local factory and store and bank and other enterprise where people are grouped together for work.

Every individual in their private lives should aim to earn a respectable living for himself and those dependent upon him; to provide for the necessary comforts and pleasure of life; to lay aside something for the future when his earning power has declined. Business should make it possible for the individual to work toward these ends.

We need to apply in our private lives some such economic formula as this:

1. To earn a living and, if possible, something besides, by honest work.
2. To produce more than we spend.
3. To put aside as our first obligation and before we spend at all, part of our earnings for future use.
4. To invest the money we save in a security which pays a reasonable rate of interest and is absolutely safe.
5. To use the rest of our earnings so as to make every penny we spend buy something we really need and want, and which has a full penny's value.
6. To use what we buy with as much care as if it were money itself.

Extravagance Is a Drain on Resources.

No individual's resources will permanently stand extravagant, just as no nation's resources will permanently stand extravagance. In factory, in home, in every enterprise where goods are produced or used or where money is earned or spent, sane economy should become the common practice of the people. We should develop such a sense of self-respect that extravagance will be regarded as the only disgrace in spending money, and economy among rich and poor will become universally respectable. That is what the individual needs. That is what business needs. That is what the nation needs.

We talk a lot about the high cost of living, but in actual practice the price of goods does not seem to matter much. When we come to make our purchases it is only the high-priced goods that interest us. So long as we are influenced in buying by the price mark instead of by the service value of the goods, prices will remain high and the so-called best will be scarce.

To whatever degree profiteering may be responsible for high cost of living, I am convinced that the permanent and lasting solution of this question is as much a matter of educating the public as of investigating profiteers. What we need is honest information in the hands of the people.

When I go into a store to buy a necktie and find ties priced from \$2 to \$7 which look very much like the ties we used to buy for fifty and seventy-five cents, I do not know whether I am being charged too much or not, and I have a right to know. The truth about the cost of goods can be had. The truth about the price of potatoes lies some place between the potato hill and the garbage can; the truth about the price of shoes, some place between the cow's back and the rubbish pile; the truth about the price of every commodity, some place between the source of production and the scrap heap of waste. If silk is too expensive to make neckties then, perhaps, men will be willing to have something else substituted for silk in making neckties, and if everything is too expensive to be used in making neckties, then, perhaps, we should be free Methodist in this respect and go without neckties.

This question of high cost of living is not a question of consumer against dealer. It must be worked out in the spirit of cooperation, and it will take the best brains and the best conscience of us all. I have said on many occasions, and I hope I am right, that 99% of dealers are honest and as much interested in working out the question of high prices as any consumer. If they are profiteering at all, they are doing so unconsciously.

Cooperation of Consumers and Dealers.

Through the cooperation of consumers and dealers two conditions should be brought about in this country. First, courage developed in the consumer to stand up in front of the counter, look into the face of a dealer and say, "No, that is more than I can afford to pay. Haven't you something of good quality at a less price, which will fill my bill as well?" And, second, dealers should have courage to stand back of the counter and help educate the people on values and how to buy a living within their means. Dealers must not be servants of demand, they must become directors of demand.

It is not possible to arbitrarily say what quality of goods any one should buy or how much they should pay for it. What we need is discrimination in buying—foresight and intelligence to buy the article which is appropriate for the use to which it is to be put. The highest priced article in many instances fills the bill better and is cheaper in the end, whereas a more reasonably priced article oftentimes shows better taste and better judgment, because it renders an equal or better service at a lower cost. We must discriminate in buying between the most appropriate and the highest priced. "I'll take the best you have" is being overworked.

No nation can produce all first-grade materials all the time. Anybody who knows anything about farming knows that we can not raise all first-grade potatoes in every potato hill, or all first-grade apples on every tree. Regardless of how finely we may breed or how delicately we may feed cattle, beef will never be all tenderloin, there will still be flank and chuck. Unless the people are willing to substitute the less desirable cuts, some of the time, tenderloin will always be high. There are more fancy goods on the shelves of American stores today than ever before in the history of the nation, and they are there partly because dealers have been led to believe that the people want them.

The average individual has no control over profiteers. We do, however, have control over our private pocketbooks. Until we learn enough about profiteers to know how to protect ourselves against them we must police our private pocketbooks against the tendency to personal extravagance and waste.

Intelligent Investment of Savings.

Regardless of how wisely people may use their money or how much they may save, unless they invest their savings intelligently either to help the government meet its obligations or for the development of legitimate business, these savings will be of no service either to themselves or to the nation. To hoard money is as bad as not to save. To invest in fake schemes is merely to throw savings away. Every individual should be taught the principles of sound investment and urged to make government securities the basis of comparison in all his investments.

If every foreigner who comes to this country could be instructed in the simple principles of finance and could be persuaded to invest his savings in government securities instead of in fake stocks, thousands of dollars' worth of honest savings would be protected from sharks and crooks and the foreigner's respect for this country would be greatly enhanced. It is a pretty safe bet that any one who bought a government bond during the war and expects to hold it to maturity is not a Bolshevik.

Permanent Investors in Government Securities.

The savings movement of the Treasury Department has been continued as a permanent activity of the Treasury in the interest of making the regular saving of some part of the people's earnings and the investment of a reasonable amount of these savings in government securities a popular American practice, as well as to enlarge their knowledge of simple financial transactions and make saving in all its forms a universal habit. The financial needs of the government during the war increased the number of investors in government securities from 45,000 to more than 20,000,000. If these millions can be held as permanent investors in war savings stamps, treasury savings certificates and government bonds, and if other millions can be added to this list, the people's savings will be secure and their devotion to the Government will be enhanced. "For where your treasure is, there will your heart be also."

Furthermore, those of us who bought government securities to help finance the war should look upon that transaction as a sacred contract. The Treasury Department figured out with mathematical accuracy how long the people's money would be needed in financing the war bills. It seems unfortunate that the bonds we bought in the spirit of war-time enthusiasm should not now, in our sober moments, be held above barter.

I do not pretend to know what great reforms will take place in this country because of the recent war. I should imagine that our experience in the past five years should have prepared us for new standards of life, for new ethics in business, for a new economic practice, for a new industrial understanding, for a new social order. We at least hope that as we worked together and served together in winning the victory, we may continue to work together and serve together in solving the problems which the war has left. I am sure of one thing, and that is, that we cannot increase production through idleness or preserve our goods through extravagance or reduce prices through profiteering, or protect our institutions through Bolshevism.

Spirit of Everlasting Cooperation.

There was one element in American life during the great war which should not be regarded as a war-time measure, but should be continued as a permanent virtue of the people, that is the spirit of cooperation and service through which a hundred million hearts beat in unison and a hundred million hands and heads acted together in meeting our common responsibility. The fine things we did in the spirit of war-time patriotism should be continued now in the spirit of everlasting cooperation.

LEAVES SANATORIUM WITH HEALTH VERY MUCH IMPROVED.

The many friends of E. J. Newey, member of Old Guard Southern Hardware Salesmen's Association, as well as representative of Alfred Field and Company, New York City, will be sincerely pleased to learn that he has left St. Joseph Sanatorium, Albuquerque, New Mexico. His health is very much improved. After a sojourn of four months in the Adirondacks, he expects to resume his travels on the road for Alfred Field and Company. His physicians assure him that by that time he will have completely regained his former vigor and that he may return to the road without any fear of untoward consequences.

WANTS TO KNOW ADDRESS OF ROSE OIL CAN COMPANY.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Can you furnish us with the address of the Rose Oil Can Company formerly located at 559 Quincy Street, Chicago, Illinois, makers of the Rose oil can?

Very truly yours,

REICHE BROTHERS.

18-22 Main Street, Naperville, Illinois,

April 26, 1920.

PRESENTED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

The Bureau of Foreign and Domestic Commerce, through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

32572. The representative of a firm in New Zealand is in the United States and desires to secure an agency and purchase hardware. Quotations should be given c. i. f. New Zealand ports. Payments, letter of credit in New York. References.

32577. A merchant in Finland desires to purchase and secure an agency for all kinds of garden tools, knives, scissors, spray pumps, trowels, etc. Quotations should be given c. i. f. Finnish ports, or f. o. b. American ports. Payment, cash. Reference.

32588. A commercial agent in Algeria desires to secure an agency for the sale of automobiles, tires, accessories, and

agricultural machinery. Quotations should be given c. i. f. African port. Payment against documents. Correspondence should be in French or Spanish. Reference.

32593. A manufacturing company in France desires to purchase 500 boxes of tin plate, 112 sheets per box, 710 by 510 millimeters by 28 by 100 millimeters thick for making tin cans for conserves. Quotations should be given c. i. f. Nantes. Payment in francs against documents. Correspondence should be in French. Reference.

32594. Buyers of raw materials for paper manufacturers and other industries in Belgium desire to secure agencies for the sale of all articles relating to industrial construction, as well as for zinc, sheet iron, etc. Quotations should be given c. i. f. Antwerp and Dunkerke, or Havre. Payments, cash. Correspondence may be in English, catalogues requested in French. Reference.

32597. A merchandising company in India desires to purchase hardware and wire products. Quotations should be c. i. f. port of India. Payment, cash against documents. Reference.

32600. A merchant in Turkey desires to purchase and secure as agency for agricultural implements. Reference.

32601. The representative of a general merchant in Siam is in the United States and desires to secure an agency and purchase for the sale in that country of hardware, tools, automobile accessories, motorcycles, household utensils, etc. Reference.

32606. A dealer in Canada desires to purchase traps for animals. Quotations should be given f. o. b. port of shipment. Payment, cash. References.

32607. A firm of merchants and commission agents in India desires to secure exclusive representation for the sale of hardware, etc. Quotations should be given c. i. f. Karachi or Bombay. Payment, 30 or 60 days' sight draft, or cash against documents, in English currency. References.

32610. A commercial agent in Spain desires to secure an agency for the sale of tin plates, metals, etc. Quotations should be given c. i. f. Alicante, Valencia, or Barcelona. Payments on sale of goods. Correspondence should be in Spanish.

32617. Importers and merchants in Syria desire to receive catalogues and price lists showing quotations c. i. f. Alexandretta or Beirut, of office furniture and agricultural implements. Correspondence may be in English.

32619. The Bureau of Public Works of a city in Syria wishes to secure price lists and conditions of delivery for supplies of implements and material for the construction of public works, such as sand sieves, trowels, hammers, wheelbarrows, and pickaxes. Reference.

32621. A merchant company in Egypt desires to secure an agency for the sale of hardware, etc. References.

32622. A commercial agent in France desires to secure an agency for the sale of automobiles, motorcycles, and bicycles, all accessories for same, and electrical apparatus. Correspondence should be in French. Reference.

32625. A merchant in Canada desires to purchase vacuum cleaners. Quotations should be given f. o. b. port of shipment. Payment, cash. Reference.

32629. A firm of commission and manufacturers' agents in the British West Indies desires to secure agencies from manufacturers for the sale of hardware and general merchandise. References.

32637. A provision dealer in Bulgaria desires to purchase and secure an agency for the sale of sheet iron, tinplates, galvanized plates, wire nails, steel in cases, and barbed wire. Quotations should be given c. i. f. Varna and Bourgas. Payment by bank credit in New York. Correspondence may be in English. References.

COMING CONVENTIONS.

Southeastern Retail Hardware and Implement Association, embracing Alabama, Florida, Tennessee and Georgia State Retail Hardware Associations, Atlanta, Georgia, May 4, 5, 6, and 7, 1920. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta Georgia.

Panhandle Hardware and Implement Association, Amarillo, Texas, May 10 and 11, 1920. E. P. Thompson, secretary-treasurer, Memphis, Texas.

Louisiana Retail Hardware and Implement Association, Alexandria, Louisiana, May 10 and 11, 1920. R. D. Nibert, Secretary-Treasurer, Bunkie, Louisiana.

Stove Founders' National Defense Association, Boston, Massachusetts, May 11, 1920. R. W. Sloan, Secretary, 826 Connell Building, Scranton, Pennsylvania.

Hardware Association of the Carolinas, Imperial Hotel, Greenville, South Carolina, May 11, 12, 13, and 14, 1920. T. W. Dixon, Secretary, Charlotte, North Carolina.

Southern Hardware Jobbers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. John Donnan, Secretary, Richmond, Virginia.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. F. D. Mitchell, Secretary, 4106 Woolworth Building, New York City.

Old Guard Southern Hardware Salesmen's Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 12, 1920. R. P. Boyd, Secretary, Knoxville, Tennessee.

National Association of Stove Manufacturers, Boston, Massachusetts, May 12 and 13, 1920. Robert S. Wood, Secretary, National State Bank Building, Troy, New York.

American Washing Machine Manufacturers' Association, Hotel Sherman, Chicago, Illinois, May 12 and 13, 1920. E. B. Seitz, Secretary, 10 South LaSalle Street, Chicago, Illinois.

Metal Branch National Hardware Association of the United States, Hotel Cleveland, Cleveland, Ohio, May 21 and 22, 1920. W. H. Donlevy, Chairman Metal Committee, 1012-1014 Cherry Street, Philadelphia, Pennsylvania.

National Association of Sheet Metal Contractors, Peoria, Illinois, June 8, 9 and 10, 1920. Edwin L. Seabrook, Secretary, 261 South Fourth Street, Philadelphia, Pennsylvania.

National Retail Hardware Association, Lafayette Hotel, Buffalo, New York, June 22, 23, 24, and 25, 1920. Herbert P. Sheets, Secretary, Argos, Indiana.

Mississippi Retail Hardware and Implement Association, Agricultural College, Mississippi, July 13, 14 and 15, 1920. E. R. Gross, Secretary-Treasurer, Agricultural College, Mississippi.

Ohio State Sheet Contractors' Association, Toledo, Ohio, July 20, 21, and 22, 1920. W. J. Kaiser, Secretary, Columbus, Ohio.

RETAIL HARDWARE DOINGS.

Indiana.

The Quality Hardware Company of Bloomington has been incorporated with a capital of \$40,000. Directors are: J. R. McDaniels, John S. Curry, and O. E. Hood.

Iowa.

Fred Hawk has bought the Sykes hardware store at Ma-nilla.

Kansas.

The Harris auto shop and hardware store is having a closing out sale at Garnett; B. E. Robe, proprietor.

A. S. Holbert and Floyd Hayter have purchased the Evans hardware store at Newton.

A. C. Egelston has bought the building formerly occupied by George Denton and the one adjoining now occupied by C. A. Simpson. Mr. Egelston will tear down these buildings and build a hardware store which he will occupy.

G. Sneed has sold his hardware store at Pratt to the Rankin brothers of Perry, Oklahoma.

The E. M. Stice Hardware Company was sold at Oswego last week to W. Reynolds.

Minnesota.

H. W. Congdon has bought the Glending hardware store at Carlton.

S. Swenson has sold his hardware business at Ellendale to W. C. Gruetzmacher.

E. Brisbin has sold his interest in the hardware business of Anderson Brothers and Brisbin at Osakis to Carl Hanson.

Missouri.

T. W. Rogers has been succeeded in his hardware business at Kirksville by H. E. Jones.

Frank McCoy has traded his farm to S. B. McCurray for his interest in the hardware store at Pleasant Hope.

The Hunter's Supply Company has changed its name at New Madrid to the Hunter Hardware Company.

Neumann and Pieper have opened a hardware store at Bloomington.

Nebraska.

Heine and Son have sold their hardware business at Hooper to Olson Hardware Company.

M. C. Rodgers has sold his hardware store at North Platte to A. T. Weeds.

Oklahoma.

McMillan Hardware Company have been succeeded by McMillan, Boyd, Wiggs and Talinferro at Madill.

Tipton Hardware Company has been incorporated with a capital of \$10,000 at Tipton. Incorporators are J. E. Miley; W. H. Sordford, and Fred Eddleman.

Pennsylvania.

Hibner-Hoover Hardware Company becomes the owner of the National Hotel building at DuBois.

Sanner Hardware Company, owners and operators of a hardware store in Shamokin and other cities, are now going to establish one that will rate with their largest at Pottsville.

Wisconsin.

P. E. Deming has bought the stock of the Hopps Hardware and Implement Company at Amery.

W. E. Fairbairn has purchased an interest in the Green Bay Hardware Company at Green Bay.

Cash Hardware Company has bought the Lloyd building at Neillsville.

Albert Breit has sold his sporting goods store at Wau-paca to J. E. Campbell.

The Trilling Hardware Company has doubled the capacity of its store at Sheboygan by taking over the building adjoining its store.

ADVERTISING CRITICISM AND COMMENT

Helpful Hints for the Advertisement Writer

Small words, each with a staccato of its own, give the simplicity of power to the advertisement of



Detroit Vapor Oil Stove

No wicks, no odor, no bother, no waste. Here's intense heat immediately under the cooking utensils at the touch of a match—first-cousin to real city gas service, and at a fuel saving of fully 25 per cent. Durable annealed iron burners weighing 6½ lbs. become glowing red and give blue flame without soot or smell. Simple, safe, convenient. Styles for all kitchens. \$18 and up.

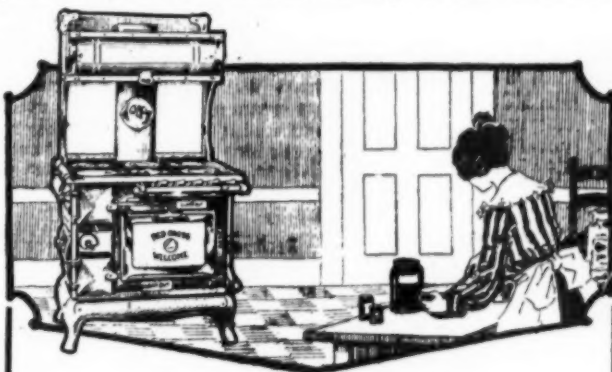
HARRY C. MAIN,

Next to Market House.

Harry C. Main, of Hagerstown, Maryland, gets the advantage of this cooperative publicity in his local advertisement. He tells the people the minimum price, namely, eighteen dollars and up. The facts concerning the Detroit Vapor Oil Stove are set forth tersely. Indeed, it may be said that the space which the advertisement occupies in *The Daily Mail*, of Hagerstown, Maryland, is utilized with the highest degree of efficiency. There is just the right amount of emphasis with the possible exception of the name of the advertiser himself at the end of the copy, which ought to be printed in heavier display type because it would identify him more strongly in connection with the commodity which he advertises.

Harry C. Main, Hagerstown, Maryland, which is republished herewith from *The Daily Mail*, Hagerstown, Maryland. The commodity which he advertises has a reputation from one end of the country to the other. Thousands of people have been familiarized with the name of Detroit Vapor Oil Stove through the columns of weekly magazines of national circulation. Therefore, when it is presented to them through a local advertisement they are likely to give attention to the advertisement because it is an advertisement of a thing with which they are already familiar.

Cooperative publicity of the very practical kind is exemplified in the advertisement of the Rochester Cooperative Foundry Company, herewith reproduced from the *Rochester Herald*, Rochester, New York. There are three dealers in that city who handle the Red Cross Welcome or the Red Cross Two-Fuel Combination Range. The advertisement mentions their names and advises the prospective customer to see one of these dealers without delay, giving the names as follows: H. B. Graves Company, Incorporated, 78 State Street, Henry Lester Hardware



"They Make Cooking and Baking Easy"

said an experienced housekeeper speaking to a friend recently about the Red Cross WELCOME and Red Cross POPULAR two-fuel combination ranges.

"It used to be drudgery for me to prepare the meals and do the baking for our family until I got one of these ranges, but now it's actually a pleasure." "My new range bakes perfectly with either coal or gas. I have discovered on two or three occasions. I use coal in the winter to help warm the house, and in the summer I use gas, which keeps my kitchen cool and comfortable."

This woman's recommendation to her friend and to every woman is, buy a

Red Cross Welcome or Red Cross Popular Two-Fuel Combination Range

We want every woman in Rochester who has meals to prepare and baking to do to get one of these famous two-fuel combination ranges during this

BIG MONEY-SAVING SALE

Until the 1st of April we'll make you this special proposition—We'll buy your old range and pay you a liberal price for it in exchange for one of these famous ranges—we'll make free connections in the kitchen, from the range to your boiler, from the range to the chimney and connect the gas to the range—and if you wish we will make you very liberal terms on any balance that you are to pay.

See One of These Dealers-To-day

H. B. Graves Co., Inc. Henry Lester Hardware Co., Inc. Kennedy & Company
78 State Street West Main, Corner Washington St. 22 South Avenue

MADE IN ROCHESTER BY CO-OPERATIVE FOUNDRY COMPANY

Company, Incorporated, West Main, Corner Washington Street; Kennedy and Company, 22 South Avenue; all of Rochester, New York.

The advertisement is equally beneficial to all three dealers. It is cleverly written and holds the interest of the reader without effort. Naturally, every woman wants to make cooking and baking easy and is sure to be attracted by anything which reduces the drudgery of the kitchen. The offer to buy the customer's old range and pay a liberal price for it in exchange for one of these Red Cross Ranges adds to the persuasiveness of the text.

HEATING AND VENTILATING

EMPHASIZES IMPORTANCE OF STUDY IN WARM AIR HEATING.

Writing in the Monthly Bulletin of the Roofing, Metal and Heating Engineers of Philadelphia, Pennsylvania, William E. Hopkin, President of the organization, emphasizes the importance of specialization in warm air heating, as follows:

"A survey of the commercial and professional field will reveal the fact that we are living in an age of *specialists*. The most noted physicians are today specialists devoting their whole energies on certain portions of the human anatomy. This same tendency can be seen among lawyers, some devoting their whole attention to Corporation Law, others to criminal jurisprudence, etc.; so that it seems to the writer that we, as Warm Air Heating Engineers, should exert all our energies and all our latent forces to develop to the highest degree *Warm Air Heating*.

"This can be done by following a well defined course: we first must in each case study well its more or less peculiar conditions, considering construction, exposure and size; determining the heat losses by transmission of both wall and glass, as well as air displacement, then determining by actual calculation the actual needs, as to size of furnace, dimensions of upright flues and cellar piping, making sure that the actual free air opening of our registers is in accordance with the requirements of the room, and in harmony with the capacities of the upright flue and cellar piping.

"After the foregoing has been correctly installed, we are still liable to achieve only a moderate success, if we have failed to take into consideration the question of air displacement. It is a well-known physical law that a certain space can only contain an atmospheric pressure of a certain quantity of air, so you will at once perceive that a room filled with air at 50 degrees can not be raised to a temperature of 70 degrees by the introduction of air at a higher temperature, unless we in some way displace the air of lower temperature.

"Under certain conditions, with favorable exposures, this can be accomplished by leakages around windows and doors, but under adverse conditions matters are sometimes made worse, so that this method can not be considered as the proper or most efficient method. Air in a room can also be displaced by having a separate and distinct system of ventilation, calling for separate registers, flues and ducts, whose sole use shall be to remove the air from the room and deliver same to an independent ventilating flue, discharging the air out of doors. From a hygienic viewpoint, this system is ideal; but from an economic consideration, it will fail in the majority of cases.

"There is still another method, and one that can be used in a very large majority of cases that will present themselves to members, and that is the system of *interior circulation*. In comparatively small houses this can be accomplished by the use of one return duct, but in large houses it would be far more advantageous to resort to two or more return ducts, eliminating to a very large degree strong counter-currents that might nullify our efforts to produce a balmy condition of atmosphere. It is my belief that, owing to the higher temperature and lower velocity with which the air in this system is returned to the furnace, that the capacity of interior circulation return ducts should be approximately 110 per cent of the heat outlets.

"The proper humidity of the air is as important as the proper amount of coal to generate the heat within the fire box. It is extremely difficult to make a hard and fast rule governing the amount of water to be evaporated. There are so many elements to be considered: the location of the house; location and character of humidifying appliances, etc.; but my experience has demonstrated that three or four quarts of water per room per day is not impossible, and if the rooms are of the average residence size, this will produce a healthful and comfortable living condition. Properly to accomplish this, the humidifier should be connected to the city water pressure, with a ball and float to control supply.

"It has been my privilege to experiment with and use all the foregoing methods, and in some instances the results achieved were rather startling, as well as interesting and instructive.

"It is my hope that the Warm Air Heating Committee will find it expedient to experiment and report their findings to the Association for our edification."

BUYS PROPERTY ON WHICH TO BUILD A NEW MODERN PLANT.

A piece of property, 100x185, at the corner of Labrosse and Twelfth Streets, Detroit, Michigan, has been purchased by The Michigan Safety Furnace Pipe Company, Detroit, Michigan. It is the intention of the company to erect a new modern plant upon the ground thus secured. The location is more advantageous than the one now occupied by The Michigan Safety Furnace Pipe Company, at 113-115 Fort Street, East, Detroit, Michigan. An architect is now drawing plans for the building to cover the full lot at the corner of Labrosse and Twelfth Street, Detroit, Michigan, which is to be two stories high and of cement construction. The Michigan Safety Furnace Pipe Company will occupy the entire second floor of the proposed structure. The first floor will be devoted to the Stearns Register Company, now located at 111 Fort Street, East, Detroit, Michigan.

Every facility for prompt and efficient handling and shipping of orders will be available in the new building.

TELLS HOW TO LAY OUT A SYSTEM OF WARM AIR HEATING IN DWELLINGS.

Clear instructions for laying out a system of warm air heating in dwellings are given as follows in the comprehensive catalogue of the Hess-Snyder Company of Massillon, Ohio, makers of "Boomer" Warm Air Heaters:

Multiply the outside length of building in feet, by the outside width, by the heights of ceilings, which gives cubical feet contents of building.

Select a furnace of a rated capacity between minimum and maximum, that will correspond to the cubical feet contents of building.

Locate furnace in basement, as near the center of work required of it as possible.

For square inch capacity of hot air pipes to first floor rooms, two sides exposed, divide the cubical feet contents of such rooms by eighteen.

First floor rooms, one side exposed, divide the cubical feet contents by twenty.

For square inch capacity of riser pipes to second floor sleeping rooms, divide the cubical feet contents by sixty.

Second floor bath room, divide the cubical feet contents by twenty-five.

The sum total of all hot air pipe areas in square inches thus obtained, must balance the area in square inches of cold air duct.

Locate hot air registers in rooms, on inside walls, as close to the furnace as possible, and cold air face at a point where cold air will be drawn from all of the rooms, with the least draft across the floor.

Cold air can be introduced into the furnace, either under or above the cellar bottom and cold air capacity should be same as warm air outlet.

For example, we refer to a house of the following dimensions.

Outside average length, 40 feet, width 26 feet, ceiling below 9 feet, above 8 feet.

40x26x17 feet equals 17,680 cubic feet, requiring a furnace rated at from 14,000 to 22,000 cubic feet capacity.

Parlor, exposed two sides, 12½x17x9 feet, equals 1,912 cubic feet, divided by 18 equals 106 square inches; use 12 inch pipe.

Sitting room, exposed one side, 16x17x9 feet, equals 2,142 cubic feet, divided by 20 equals 107 square inches; use 12 inch pipe.

Dining room, exposed one side, 12½x13x9 feet, equals 1,467 cubic feet, divided by 20 equals 73 square inches; use 10 inch pipe.

Hall, first floor, exposed two sides, 10x17x9 feet; hall second floor, exposed one side, 8x12x8 feet; equals 2,298 cubic feet, divided by 20 equals 115 square inches; use 12 inch pipe.

Front bedroom second floor, 13x15x8 feet; front bedroom second floor, 10x11x8 feet; equals 2,440 cubic feet, divided by 60 equals 41 square inches; use

3½x13½ inch riser pipe, 9 inch cellar connection.

Rear bedroom second floor, 12x13½x8 feet; rear bedroom second floor, 13x13x8 feet; equals 2,648 cubic feet, divided by 60 equals 44 square inches; use 3½x13½ inch riser pipe, 9 inch cellar connection.

Bath room second floor, 5x9½x8 feet; equals 384 cubic feet, divided by 25 equals 16 square inches; use 3½x10½ inch riser pipe, 8 inch cellar connection.

Total capacity of all rooms to be heated, 13,291 cubic feet; total pipe capacity, 502 square inches; requiring 26 inch diameter cold air pipe, 18x30 cold air duct, 18x30 to 26 inch round cold air stub.

For churches, school houses and store rooms, the foregoing rules will apply, except in determining the size of hot air pipes, for which use the following:

Churches, cubical feet contents of room, divided by 40, equals square inches pipe capacity.

School houses, first floor, cubical feet contents of room, divided by 30, equals square inches pipe capacity.

School houses, second floor, cubical feet contents of room, divided by 40, equals square inches pipe capacity.

Store rooms, first floor enclosed, cubical feet contents of room, divided by 40, equals square inches pipe capacity.

Store rooms, second floor enclosed, cubical feet contents of room, divided by 60, equals square inches pipe capacity.

In public buildings, where possible, we recommend hot air pipe to be taken directly off top of furnace, and cold air in accordance with the State Code.

HEATING CAPACITY IS ENLARGED BY CURVED FORMATION OF RADIATOR.

The Home Comfort Warm Air Heater, illustrated herewith, manufactured by the Wrought Iron Range Company, St. Louis, Missouri, is constructed to make



Home Comfort Warm Air Heater, Made by the Wrought Iron Range Company, St. Louis, Missouri.

the home comfortable economically. In this warm air heater the radiators are a very important part of its technical construction. They are built on curved lines. The three vertical tubes on the radiators are of steel, made fast to round, grey iron elbows. Two of the tubes are firmly bolted to the dome, near the top. The

third tube is turned outward to connect with the chimney flue. The lower ends of all the tubes are connected to a horizontal chamber, which is designated as the dust box. By means of this arrangement the heat is circulated in such a manner that a comparatively

large portion of it is utilized for the purpose of warming air and sending it up into the house. The dust box is of heavy grey iron. This grade of metal resists the chemical action of ashes, and likewise withstands the destructive forces of dampness. In design the dust box is formed to overcome the accumulation of soot, dust and other extraneous matter. Two clean-out tubes are cast in the dust box and protrude through the casing at convenient points in the rear of the warm air heater. Grates in all warm air heaters are subjected to a tremendous strain. They must, in order to give good service, be able to bear the weight loaded on them. Wherefore, the Wrought Iron Range Company has spent much time and study in perfecting the grate which is installed in the Home Comfort Warm Air Heater. It is a combination of strength and simplicity. There are no cogs or other intricate mechanisms on the Home Comfort grate. The device employed on this grate for mounting and dismounting is simple and unique. To attach a bar, the inner end is inserted into a socket of the rear grate rest. Then the especially designed hanger is slipped on in at the front end. Thereby the grate is made firm. Dealers who wish to obtain detailed information describing completely the functioning of the Home Comfort Warm Air Heater, or installers who desire to procure the terms of agency for this line of products, write to the Wrought Iron Range Company, St. Louis, Missouri.

WARM AIR HEATER COMPANY ISSUES PROSPECTUS OF ART CALENDARS FOR USE OF DEALERS.

The prospectus of the 1921 art calendars which R. J. Schwab and Sons Company, Milwaukee, Wisconsin, is issuing for the consideration of the trade contains two full size reproductions of the illustrations in colors which are to serve as frontispiece decorations for the calendars. The Company is taking orders now for these calendars which are to be delivered any time after October 1, 1920. The advertisement of the dealer is to be printed on the calendars without extra charge. One of the calendars is illustrated with a charming reproduction of R. F. Ingerle's masterpiece, "Love's Gift Divine," showing a Madonna-like study of mother and child. The other calendar has for its title cover in decorative oval a wonderful impressionistic study in colors by P. E. Chillway, entitled "The Glory of Spring." The calendars are sold to dealers as an effective form of advertising and only actual cost is charged for them. They may be ordered now but need not be paid for until December, 1920. Full particulars and beautiful prospectus can be obtained by writing to R. J. Schwab and Sons Company, Milwaukee, Wisconsin.

REQUESTS PRICES AND TERMS ON PIPELESS WARM AIR HEATER.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

I am looking for a good pipeless warm air heater. Dealers please write and send prices and terms.

E. ASHBA.

Huntsville, Ohio, April 26, 1920.

SUMMER MEETING OF HEATING AND VENTILATING ENGINEERS WILL BE HELD IN ST. LOUIS.

The American Society of Heating and Ventilating Engineers will hold its semi-annual summer meeting May 26, 27, and 28, 1920, in St. Louis, Missouri. An instructive program will be carried out and those who attend the sessions will be amply repaid for their time and trouble by the exchange of valuable ideas and the stimulus of professional intercourse.

GIVES RESULTS OF RESEARCH WORK IN HEAT RADIATION.

The Research Committee of the Institution of Heating and Ventilating Engineers have been conducting experiments and studies in heat radiation at the London University, London, England. The investigations have been carried out by Masao Kinoshita, M. Sc., under the direction of A. H. Barker, B. A., B. Sc. They are summarized in part as follows in *Domestic Engineering* by Mr. Kinoshita:

The radiation of heat energy from a body surface is of great importance, not only from the point of view of pure physics, but also technically in relation to the domestic or industrial utilization of heat. This problem plays one of the most essential rôles in connection with the heating of dwellings as well as industrial buildings, the transmission of heat by radiation is as important as by conduction. Its consideration has been more or less neglected, except by a few investigators who have determined coefficients of heat emission by radiation from various surfaces, or the heating efficiency of open fire grates and stoves, or the hemi-spherical distribution of the radiated energy from them, and similar matters. The purpose of this research is to investigate the heat energy radiated from some surfaces of simple form, together with the mutual effect which the radiation from one surface produces on that from another in its neighborhood.

As in all practical cases only the total heat emission is of importance, there is no necessity to discuss the radiation energy of any particular wave length of heat ray. Kirchhoff's law is assumed to be safely adopted, without any serious error for practical problems. Since there is no general law for non-black bodies the assumption that Stefan's fourth power law for the total radiation, which forms the basis of calculation, or some similar law holds good is the only means by which numerical calculations can be made. In reference to the reflection of heat ray by a surface, Lambert's law is used.

The amount of heat energy transmitted by radiation from one body to another depends on: 1. The natures of the surfaces, their coefficients of emission and absorption of heat radiation. 2. The temperatures of the surfaces. 3. The diathermancy of the medium separating the surfaces. 4. The forms, dimensions, and relative positions of the surfaces.

As a basis of calculation, the above three laws are so well established that there is no necessity to discuss their accuracy, but the variation in form, size and relative position of the surfaces introduce into the problem considerable geometrical complexity, and also

alter the actual intensity of radiation emitted from a single isolated surface. The last factor is the special part of the subject dealt with in this investigation which includes simple theoretical examples as well as experimental to verify the theory.

The investigation deals with the building up of the theoretical equations, for original radiation of heat, the intensity of radiation, the total heat energy radiated, neglecting the effects of reflected rays. They have proved to be very convenient in practical application for the rate of heat loss by radiation from a human body whilst sitting in front of a fireplace in a cold room; the amount of heat received by any part of walls when an electric radiator is switched on; and the loss of heat by radiation from a radiator.

Rietschel described an experiment on the diminution of heat emission from a plane in front of another heat emitting surface. He used two parallel rectangular plate radiators of equal size, each being two meters in height and 0.7 meters in width, heated to the same constant temperature by means of steam which had a temperature of 61 degrees Centigrade above the air temperature. Unfortunately it is not mentioned what was the physical nature of the surfaces. Assuming that the plates were made of iron, either wrought or cast, the coefficients of heat emission at 100 degree Centigrade is about 0.9 emissivity if the surface is matt and oxidized, while it is about 0.35 emissivity if bright, where emissivity is the emissivity of the absolute black body. Taking the probable value of 0.7 emissivity, the percentage reduction of the emission of heat energy from one surface due to the presence of another surface is compared with Rietschel's experimental results showing that when the distance between the plates is more than 50 centimeters, the amount of upward convection currents of air along one of the surfaces is practically the same as when it is isolated. The closer they come to each other the greater the flue effect, and consequently, the greater is the amount of heat carried away by convection. When the distance becomes very short the emission of heat from the surfaces diminishes, due to the frictional resistance.

A description is given of a small radiometer for measuring the intensity of heat radiation. By placing this radiometer in any position desired, the time in seconds of the rise of temperature of the receiver, containing oil heated by an electric heater, between certain limits was measured on the galvanometer scale with a stop watch. In this way the loss of heat by the receiver due to the motion of air was minimized to a practically negligible amount. Observations were taken on parallel and perpendicular planes, cylinder and sphere.

The emissivities of painted surfaces, white and aluminum, were determined experimentally to compare with the apparent emissivities calculated from a formula laid down. The small differences between the observed emissivity and the calculated being explained by experimental error and also by the roughness of the assumption that the distribution of the intensity of radiation over the surface was uniform. When the surfaces were unpainted, the values of the calculated were found to be much less than the ob-

served. For surfaces such as unpainted fresh tinned iron plates, the reflection does not follow the cosine law. The reflections in definite directions alter the whole results.

Experiments on oblique radiation showed that the plane surface curve deviates considerably from the cosine curve. If the distance between the plane surface and the thermopile is very great, the curve must practically coincide with the cosine curve. A comparison of these curves showed that the deeper the surface is waved the greater is the deviation from the plane surface in the lower part of the curve, whereas for such waved surfaces the distribution factor, which is the ratio of the total hemispherical radiation to that over a central equatorial area, is higher, the deeper the surface is waved. Ordinary hot water or steam radiators for heating purposes may therefore be expected to produce a result similar to these waved surfaces.

PUBLISHES INSTRUCTIVE CATALOGUE.

An excellently illustrated catalogue, which is at the same time a helpful textbook on installation and other matters pertaining to the trade, is published by The Hess-Snyder Company, Massillon, Ohio, makers of the "Boomer" Warm Air Heater. Some notion of the valuable contents of this catalogue may be gained by quoting at random subjects which are treated in its pages, such as Method of Piping; Smoke Consumer; Foundation Plan and Sizes; Ash Pit and Cold Air Pit; Capacity of Pipes and Registers; How to Lay Out a System of Hot Air Heating, etc. Copies of this instructive catalogue can be had by dealers and installers who ask for it by addressing The Hess-Snyder Company, South Erie Street, Massillon, Ohio.

CENTRAL HEATING SUPPLY COMPANY IS REORGANIZED.

The Central Heating Supply Company, Chicago, Illinois, has been reorganized with the following officers:

President: MICHAEL J. HANLEY;

Vice-president: WILLIAM M. HANLEY;

Treasurer: ROBERT C. EVANS;

Secretary and General Manager: THOMAS W. PEARSON.

The reorganized company will take immediate possession of the commodious new warehouse at 37th and Wall Streets, Chicago, Illinois, in the heart of the central manufacturing district of the city, where complete stocks of furnace fittings and furnace accessories will be available to the trade.

The capital stock of the Central Heating Supply Company has been increased to \$40,000, and the company expects considerably to expand its business in the Chicago territory.

Excellent facilities are afforded in the new warehouse which is served by the Chicago Junction Railway having connections with all Chicago railroads. Thus the company will be able to make quick shipments and live up to its motto, "Quality plus Service." Naturally, in harmony with this motto, it will continue to handle the well-known Lamneck line of furnace fittings.

PRACTICAL HELPS FOR THE TINSMITH

PATTERNS FOR OIL TANK.

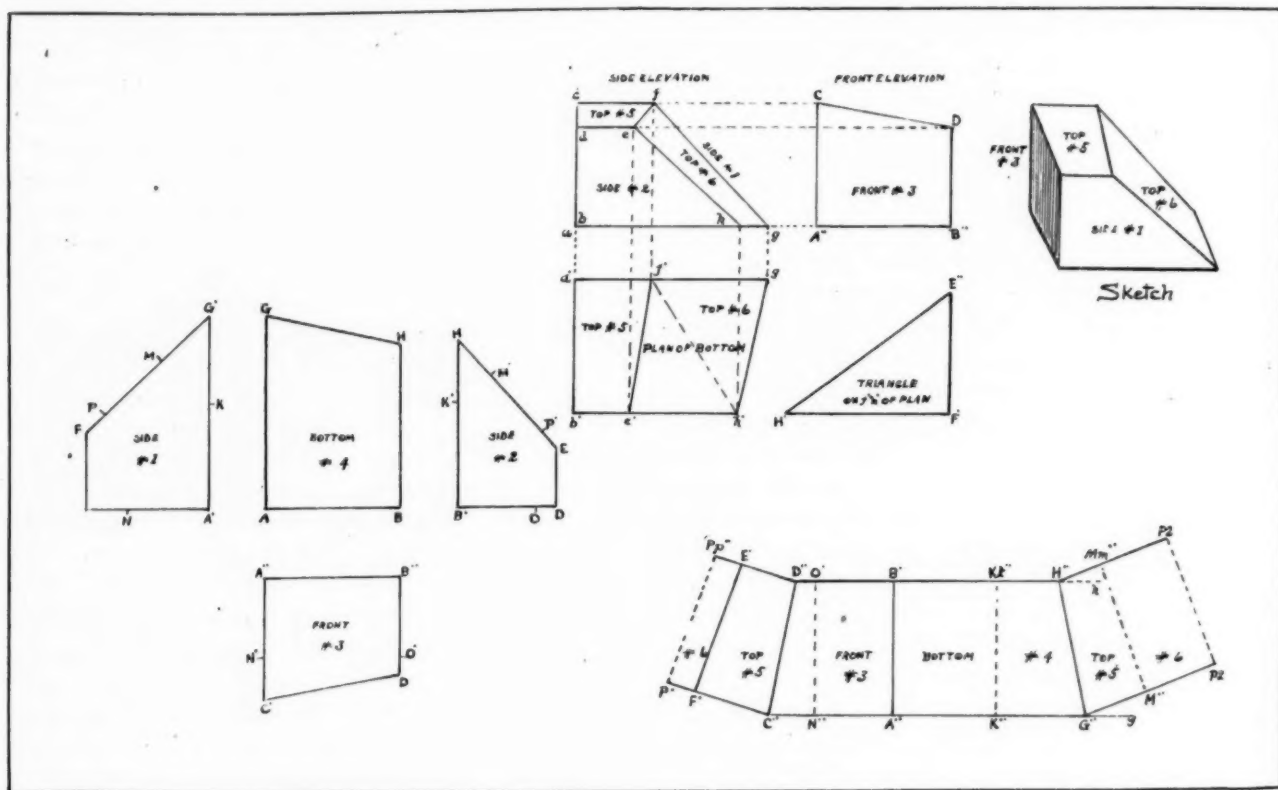
By O. W. KOTHE.

Oil tanks are made in a multitude of shapes and designs, and especially with boat and launch construction. In our sketch we have a peculiar design, which has six sides and no two are alike. For convenience we have numbered them as No. 1, No. 2, No. 3, etc. Considering our working drawing of elevations and plan we get the different shapes better in mind.

Observe the bottom and back really form square

DESIRES CATALOGUES OF SUPPLIES.

After many years' experience as a craftsman in the trade, Henry M. Hastings of Lexington, Illinois, has decided to go into business for himself. Accordingly, he is opening a sheet metal work shop in Lexington, Illinois, and intends to include warm air heater installation, plumbing, and pump work. In order that he may be fully informed with a regard to the sources of supplies and price conditions, he requests catalogues and price lists from manufacturers and jobbers



Patterns for Oil Tank.

bends and from this we can easily add the other top No. 5 and top No. 6. This makes the body in one piece, and only requires the end pieces to be inserted, which are really a reproduction of the side elevation. But for the workman who makes each side in a separate piece, we have laid them out individually as shown. Attention is called to the various miters which fit together.

This being a very irregular problem the top No. 6 is well to develop by the aid of the triangle as shown. The workman must allow his own edges to suit the seam he wishes to make. If double seamed additional stock should be allowed for seaming in the finished side so the side will set in and can be seamed over. The same holds good for riveting the edges by means of flanges turned up. The last side would be set in and riveted from the outside. If this is not done the tank would be an inch short.

of sheet metal products and warm air heaters and warm air heater accessories.

OBTAINS PATENT FOR A SOLDER.

United States Patent Office rights have been granted to George P. Luckey, Wilkesburg, Pennsylvania, assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania, for a solder comprising an alloy of lead and cadmium.

The solder is claimed to contain substantially 90 per cent to 94 per cent lead and 6 per cent to 10 per cent cadmium.

It is disgraceful to stumble against the same stone twice. A wise man is one who learns from his blunders.



PRODUCES AN EXCELLENT LINE OF BALL-BEARING PUNCHES.

It will not be denied that the most skillful workman is at a disadvantage in using inadequate tools.



No. 5 Jr. Whitney Ball-Bearing Punch,
Made by the Whitney Metal Tool
Company, Rockford, Illinois.

His skill is inseparable from the instruments with which he exercises it. Indeed, it may be said without possibility of contradiction that efficiency hinges as much upon the right mechanism as upon personal-ity and training. Consequently, in order to get the highest returns from the trained labor of a sheet metal shop it is imperative that the equipment be of the best obtainable. In this connection attention is called to the excellent line of ball-bearing portable rotary hand metal punches, made by the Whitney Metal Tool Company, of Rockford, Illinois, one of which is shown in the accompanying illustration. Many advantages are claimed for these punches. The Number 5 Jr. will punch a one-fourth-inch hole in number eighteen gauge iron or its equivalent. It will be noticed that this punch is slightly crowned to eliminate friction so that all power is directed to the center of the punch. Whitney Ball-Bearing Portable Rotary Punches are intended to float so that when the punches come in contact with the material it will not revolve with the screw or spindle. Sheet metal mechanics and contractors can obtain further particulars concerning this excellent line of punches by writing to the Whitney Metal Tool Company, Rockford, Illinois.

BE UPON YOUR GUARD AGAINST THE GET-RICH-QUICK PROMOTERS.

A "sucker list" of 25,000 names recently was advertised to be sold at auction in New York. It was almost the sole remaining asset of a broker who "promised" tremendous profits to investors. Now the broker is said to be "broke," his affairs have been thrown into the hands of a receiver, and the sucker list, 1,200 of which were "live," and the lease of his offices and a few shares of cheap oil and mining stocks which are said to be practically worthless, are all that the receiver can find to satisfy the claims of the dupes.

The doctors, lawyers, preachers, school-teachers, officers of small banks, soldiers, sailors, widows, and orphans from nearly every state in the Union who sent a total of \$750,000 to be invested may be interested to learn that the price paid for their names and addresses probably will be about all they will ever get back.

This broker, it is said, offered in his advertisements to purchase stocks on the installment plan for investors who were to pay 20 per cent down and the remainder in deferred payments. The receiver appointed has this to say about the broker's transactions:

"He had a big business built up and would have made a success of it if he had not plunged on the market. From May or June until the end of last year he bought practically no stocks for customers. He used the money sent him by people all over the country to play the market. The broker's customers who began to complete payments on their stock in the fall commenced to demand deliveries. He could not make them. The receivership followed.

"The case is particularly flagrant because of the class of people attracted by his advertisements. We find on investigation that most of them were people in moderate circumstances. One customer sent \$35,000 in cash for the purchase of stocks which were never bought. Many sailors and soldiers just indorsed their Government checks over to him."

When asked about the assets discovered, the receiver said:

"We made a good turnover of the lease on his office. That brought \$7,500 in cash. Then we are informed that the customers' list is very valuable and will bring several thousand dollars. But it certainly will be a pitifully small amount that people who believed they were buying stocks will receive."

This is but one instance of one way in which investors throughout the country have been and are being victimized by unscrupulous promoters, get-rich-quick operators and confidence men. The country is overrun with grafters and fakers who are endeavoring to induce investors to exchange their Liberty Bonds for stocks which are worthless or of doubtful value. These promoters are willing and eager to promise anything. They place no limit on their promises but there is a very definite limit on fulfillment. They know that the Liberty Bonds are the world's best investment. They are both willing and anxious to obtain them in exchange for promises which cost them nothing.

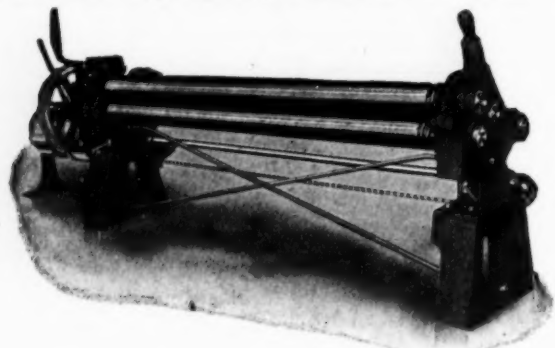
No one line of industrial or speculative endeavor is exempt from these parasites. They are prepared to sell you stock in anything. Their activities range from the proposal made to a woman in Georgia of stocks in the League of Nations, common at \$4 a share or \$5 with reservations, to stock in a cold-storage plant to be operated by the aurora borealis.

The promise to pay Liberty Bonds, assumed by the Government, is backed by the faith and honor and total riches and resources of the Nation. You know that you will receive the entire amount of their face value with interest when they mature. If you fail to hang on to your bonds you may get nothing back from your savings except what your name on a sucker list will bring.

Duty is one and invariable; it requires no impossibilities, nor can it be disregarded with impunity; so far as it exists, it is binding so as on no account to be neglected.—Thoreau.

ITS CONSTRUCTION IS DURABLE.

It can be seen from the illustration herewith of the Niagara Slip Roll Forming Machine, manufactured by the Niagara Machine and Tool Works, Buffalo, New York, that its construction is sturdy. The makers declare that only the best materials are used. The



Niagara Slip Roll Forming Machine, Made by the Niagara Machine and Tool Works, Buffalo, New York.

Niagara Slip Roll Forming Machine, shown in the accompanying illustration, is double geared with double friction clutch. Drive and other details can be arranged to suit the varied requirements of individual users. These machines are made in many sizes. On some of the Niagara Slip Roll Forming Machines made by the Niagara Machine and Tool Works the forming roll is adjustable. On the larger machines, sprocket wheels and chains are applied for simultaneous adjustment of both ends. On the regular machines the rear of forming roll is not driven by gears. If desired, a set of three gears can be provided to drive the rear roll from the lower roll. It is then possible to feed the material without setting the front rolls as closely together as is ordinarily required, declare the manufacturers. For more complete details write to the Niagara Machine and Tool Works, Buffalo, New York.

FABLE PLACES BLAME FOR THE HIGH COST OF LIVING.

The following clever fable, reprinted from The Tickler, places the blame for the high cost of living where it belongs. It is a sharp jolt to our self-complacency:

"I have a motor car that is two years old. It is a good bus, and I know it will run as far and as fast as I could drive a new motor car. I know its temperament, its weaknesses, its strength, and how to adjust its carburetor to save gas.

"Jones' new car has a cigar lighter, a vanity case, a card table and a whisky still—all part of regular equipment. It will also go umpty-ump miles an hour if anybody dares to drive it that fast.

"Jones is my neighbor. My wife and Jones' wife are in the same social 'set.' The 'set' approves Jones' car. They ignore mine. Do I keep my good old car and save 1,500 large, round iron men—minus a hundred for a new coat of paint?

"I do not! I agree with Minnie that our social position demands a new car. We search hungrily for a car that will outjones Jones, aided and abetted by at-

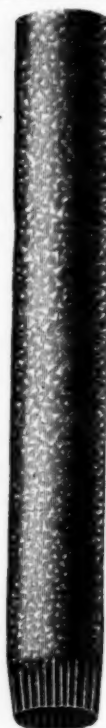
tractive young men who can make their demonstrators run as smoothly as a Presidential message.

"We find one that has all the equipment that Jones' has, with the addition of an electric hair-curler, a lavatory and pink flowers embroidered on the upholstery. Then do we keep quiet about the high cost of living? We do not! Minnie reads a paper on the 'Nutritive Value of the Water in Which Green Corn Has Been Boiled' before the Women's Club, while I go to Washington and sing bass in a chorus entitled, 'We must reduce the H. C. L.—the country's going plumb to the dogs.'

"Do we all do it? Mostly we do."

EMPLOYS RUST-RESISTING METALS.

Toncan metal of which the Berger's Plain Round Conductor Pipe, manufactured by The Berger Manu-



Berger Plain Round Conductor Pipe, Made by The Berger Manufacturing Company, Canton, Ohio.

factured herewith, is made is said to resist corrosion because of its structure and process of manufacture. To prevent corrosion, uniformity, purity, density and proper heat treatment are necessary. All four of these qualities are practically of equal importance in producing the desired results. The preservation of iron or steel varies directly with the rust-resisting properties of the material used in its production. The only way to make sure that the finished metal will have corrosion-resisting qualities is to employ in its manufacture only those elements which are known to have density and rust-resisting properties. In making Toncan metal it is claimed a careful selection is made of the metals entering into its manufacture.

In shape the Berger's Plain Round Conductor Pipe is uniform throughout its entire length. Each piece is a duplicate of the one reproduced herewith. There is no variation. When sheet metal contractors order this article they can rely upon it that each length will be uniform. Considering the rust-resisting qualities of Berger's Plain Round Conductor Pipe, it can be seen that it would make a desirable article to use for good work. For detailed information, write to the Berger Manufacturing Company, Canton, Ohio

UPHOLD PRIVATE PROPERTY RIGHTS.

The principle of the rights of private property is one of the pillars of the structure of liberty, as liberty was always understood in America, and is still understood by the overwhelming majority of Americans. You can not seriously weaken one pillar of that structure without weakening the whole.

The legitimate rights of property, subject of course to the reasonableness and proper exercise of the superior rights of the community, are among those elements the sum total of which makes up liberty in its true meaning.

GETS SATISFACTORY RESULTS FROM AD IN AMERICAN ARTISAN

TO AMERICAN ARTISAN AND HARDWARE RECORD:

Please discontinue our want ad for sheet metal worker in your publication. We have received replies from three states and apparently from very capable mechanics. Thanking you for the satisfactory results obtained, we are

Very truly yours,

VAN DENBERG SUPPLY COMPANY.

Rockford, Illinois, April 29, 1920.

NOTES AND QUERIES.

Address of H. D. Smith and Company.

From C. Arthur Roy, 224 East Third Street, Corning, New York.

Please give me the address of H. D. Smith and Company, manufacturers of the "Perfect Handle" wrenches.

Ans.—They are located in Plantsville, Connecticut.

"Fairy Queen" Gas Iron.

From C. Arthur Roy, 224 East Third Street, Corning, New York.

Kindly advise who manufactures the Fairy Queen gas iron.

Ans.—Central Flatiron Manufacturing Company, Johnson City, New York.

Roberts Victor Bolt Clipper.

From A. F. Schemmer, Rock Valley, Iowa.

Can you tell me who makes the Roberts Victor Bolt Clipper?

Ans.—Roberts Manufacturing Company, Somerville, Massachusetts.

Lundy Soldering Pot.

From A. F. Schemmer, Rock Valley, Iowa.

I would like to know who manufactures the Lundy soldering pot.

Ans.—Double Blast Manufacturing Company, North Chicago, Illinois.

Manual Training Bench.

From C. A. Peck Hardware Company, Berlin, Wisconsin.

We would like to know where we can obtain a work bench such as the Manual Training Schools use fitted out with a bench vise and tool rack complete.

Ans.—Richards-Wilcox Manufacturing Company, Aurora, Illinois.

Lawn Rollers.

From C. A. Peck Hardware Company, Berlin, Wisconsin.

Please let us know where we can purchase lawn rollers that are made of galvanized iron, the weight being governed by the amount of water put in them.

Ans.—Dunham Company, Berea, Ohio.

"Swissalu" Aluminum Ware.

From Star Tin Shop, 288 East Second Street, Fort Clinton, Ohio.

We would like to know the address of G. H. B. Company, who makes aluminum ware branded "Swissalu."

Ans.—George H. Bowman Company, 224 Euclid Avenue, Cleveland, Ohio.

Sheet Mica.

From Safety Iron Company, East Market Street, Huntington, Indiana.

We would like to know where we can purchase sheet mica.

Ans.—Eugene Munsell and Company, 542 South

Dearborn Street; Producers Mica Company, 225 East 22nd Street; U. S. Mica Manufacturing Company, 14 East Jackson Boulevard; and Mikesell Brothers Company, 174 North LaSalle Street; all of Chicago, Illinois.

Tempered Steel Wire.

From I. X. L. Tire Company, Peoria, Illinois.

Kindly advise where we can buy 16 gauge tempered steel wire.

Ans.—John A. Roebling's Sons Company, 165 West Lake Street; and Steel Sales Corporation, 129 South Jefferson Street; both of Chicago, Illinois.

Chemical Closets and Urinals.

From T. P. Johnson, Louisburg, Kansas.

Please advise where I can secure chemical closets and urinals.

Ans.—Independent Register Manufacturing Company, Cleveland, Ohio; Automatic Chemical Closet Company, 1417 Washington Avenue, North, Minneapolis, Minnesota; Dail Steel Products Company, Lansing, Michigan; Kawnear Cabinet Company, 1716 Wabash Avenue, Kansas City, Missouri; Smith System Heating Company, 821 Washington Avenue, Southeast, Minneapolis, Minnesota.

Roofing Slate.

From S. R. Milbrandt, care of Aberdeen Furnace Company, Incorporated, 611 South Main Street, Aberdeen, South Dakota.

1. We would like to know who manufactures roofing slate. 2. Also who makes slate surface shingles.

Ans.—1. Auld and Conger Company, 942 Prospect Street, Cleveland, Ohio; F. C. Sheldon Slate Company, Granville, New York; Vendor Slate Company, Bangor, Pennsylvania. 2. Whitaker Paper Company, Cincinnati, Ohio; Flintkote Company, 88 Pearl Street, Boston, Massachusetts, make slate surface shingles.

Baseball Back Stops.

From King Andrew Hardware Company, 105-07 North Madison Street, Rockford, Illinois.

Where can we procure baseball back stops similar to those used at the Sox Park?

Ans.—A. G. Spalding and Brothers, Wholesale Department, 211 South State Street, Chicago, Illinois, can supply you.

Lawn Mower.

From Braden and Schmidt, Dysart, Iowa.

We would like to know the name of the lawn mower that has a thumb screw adjustment on the bottom blade.

Ans.—The Eclipse lawn mower, manufactured by the Eclipse Lawn Mower Company, Prophetstown, Illinois.

Pump Valves.

From D. E. Treat and Company, Payne, Ohio.

Please tell us where we can buy 2½ inch pump valves for hand made galvanized cistern pumps.

Ans.—Berger Brothers Company, 229 Arch Street, Philadelphia, Pennsylvania; Acme Rubber Manufacturing Company, Trenton, New Jersey.

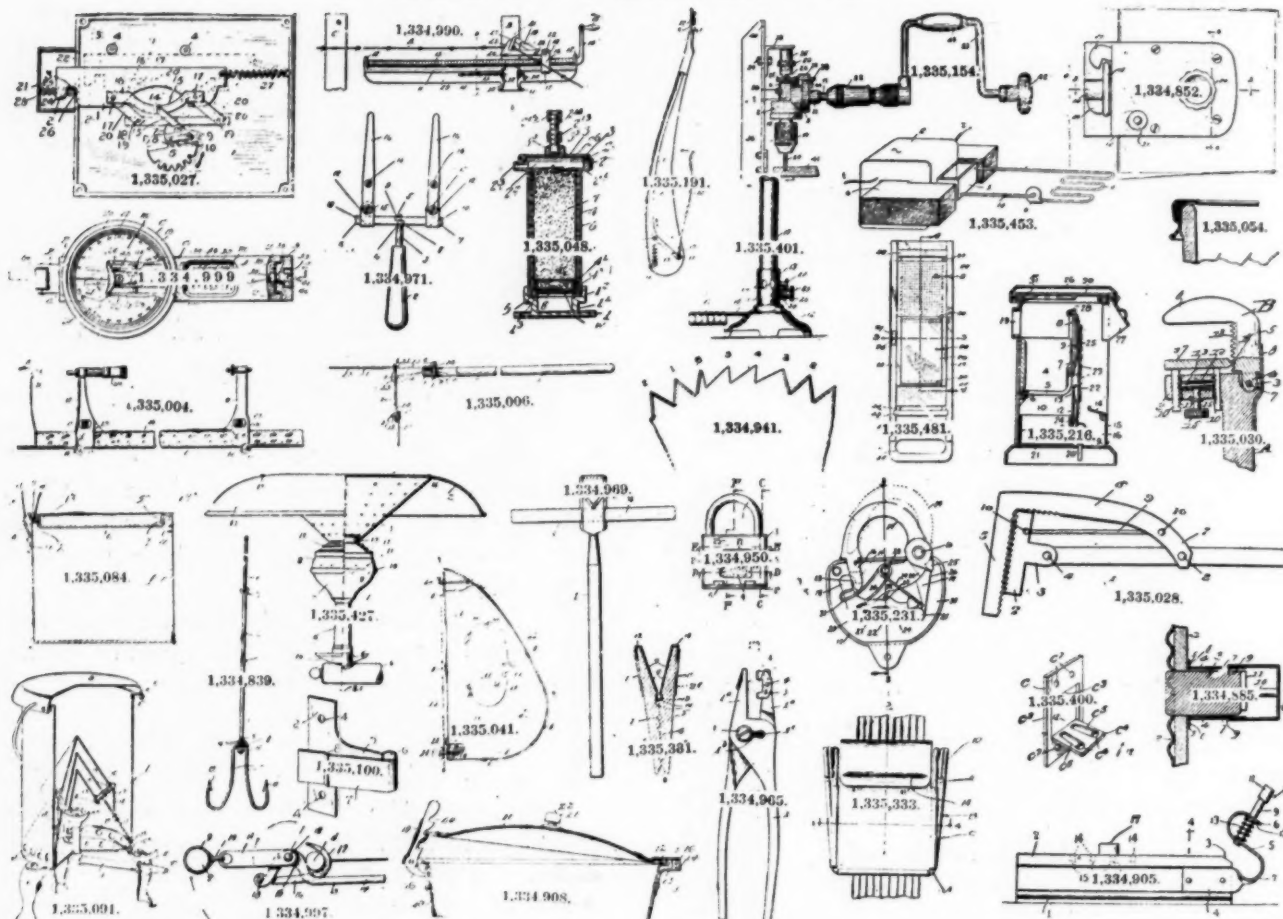
Leather Pump Plungers.

From D. E. Treat and Company, Payne, Ohio.

We would like to know who makes leather plungers 2½ inch for hand made galvanized cistern pumps.

Ans.—John J. Stein, 30 Clay Street, Brooklyn, New York.

NEW PATENTS.



1,334,852. Lock. Louis H. Gorowitz, New York, N. Y. Filed Oct. 22, 1919.

1,334,885. Self-Soaping Washboard. Fred A. Brusky, Great Falls, Mont. Filed July 14, 1919.

1,334,898. Reamer. Torston Alfonso Gyllsdorff, Detroit, Mich. Filed June 27, 1919.

1,334,905. Saw-Set. Leon L. Kaiser, Imlay, Nev. Filed June 24, 1919.

1,334,908. Cooking Utensil. George F. Kinzel, West Orange, N. J. Filed April 3, 1919.

1,334,941. Saw. Henry E. Blake, Elsmere, N. Y., assignor of one-third to Dudley P. Babcock, Albany, N. Y. Filed March 22, 1919.

1,334,950. Lock. Joseph Forsheim, Great Neck, and Joseph Konigsberg, New York, N. Y., assignors to Lena S. Forsheim, Great Neck, N. Y. Filed Sept. 16, 1916.

1,334,965. Jawed Tool. John Henry Ridings, Minneapolis, Minn. Filed March 8, 1917. Renewed Aug. 6, 1919.

1,334,969. Garden-Tool. Edward W. Sagert, Archbold, Ohio. Filed July 1, 1919.

1,334,971. Hand-Vise. Oscar N. Shore, University Place, Nebr. Filed Dec. 20, 1919.

1,334,990. Wire-Stretcher. Dezere Clyneke, Boulder, Colo. Filed Oct. 19, 1916. Renewed Nov. 20, 1919.

1,334,997. Gate-Hook. Harvey R. Grenard, Sioux Falls, S. D. Filed May 13, 1919.

1,334,999. Machinist's Gage. Charles Haley, Royal Oak, Mich. Filed June 7, 1918.

1,335,004. Micrometer and Height Gage. Dan Henry Lehigh, Chicago, Ill., assignor of one-half to Homer J. Richer, Chicago, Ill. Filed March 19, 1919.

1,335,006. Combined Garden Implement. Tony Samuel Maultsby, Greenville, N. C. Filed Dec. 7, 1918.

1,335,027. Mortise-Lock. Michael J. Popovich, East Pittsburgh, Pa. Filed May 7, 1918.

1,335,028. Wrench. Lucas Renfelle, Warren, Ohio. Filed April 26, 1919.

1,335,030. Wrench. Clem Roome and William H. Haas, Raub, Ind. Filed Oct. 23, 1918.

1,335,041. Flytrap. Andrew C. Byers and William B. Fritze, Forreston, Ill. Filed Aug. 25, 1916.

1,335,048. Coffee-Filter. Orvis G. Diefendorf, Watertown, N. Y. Filed May 6, 1919.

1,335,054. Metal Cap. Charles Hammer, Brooklyn, N. Y., assignor to American Metal Cap Company, Brooklyn, N. Y., a Corporation of New York. Filed July 17, 1918.

1,335,084. Can-Cover Remover. William Winkler, Sandusky, Ohio. Filed Sept. 25, 1919.

1,335,091. Gas-Heater. George Checkley, Winthrop, Mass. Filed July 11, 1919.

1,335,100. Door-Fastener. Mathew P. Embach and John L. Bruce, Holdenville, Okla. Filed March 31, 1917.

1,335,154. Portable Drill-Press. Malcolm J. Bradley, Oakland, Calif. Filed July 5, 1918.

1,335,191. Stove-Lid Lifter. Joseph Polshaw, Steubenville, Ohio. Filed Sept. 26, 1919.

1,335,216. Heater. Ernest Blackburn, Millvale, and Frederick G. Smith, Westview, Pa. Filed Feb. 11, 1919.

1,335,231. Padlock. William S. Hamm, Hubbard Woods, Ill., assignor to The Adams & Westlake Co., a Corporation of Illinois. Filed Dec. 23, 1919.

1,335,331. Clothespin. John E. Gunderson, Foxboro, Wis. Filed Sept. 20, 1918.

1,335,333. Rule and Tool Holder. Hjalmer Hanson, San Francisco, Calif. Filed Jan. 9, 1919.

1,335,400. Hinge. Joseph Soss, New York, N. Y. Filed March 8, 1919.

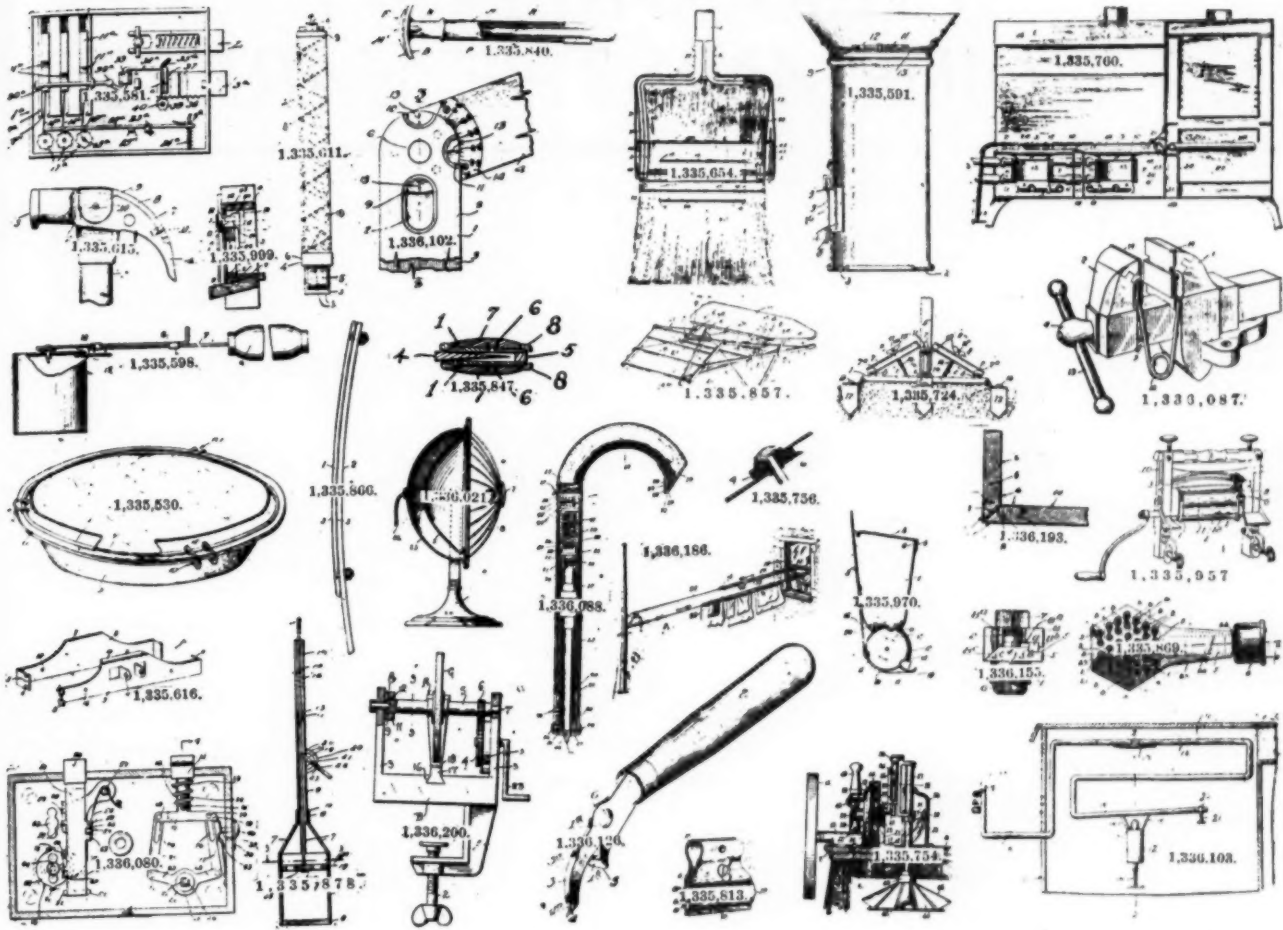
1,335,401. Fuel-Regulating Device for Burners. Otto Spahr, Philadelphia, Pa. Filed Feb. 7, 1917.

1,335,427. Gas-Heater. Bernhard Columbus, New York, N. Y. Filed May 3, 1918.

1,335,453. Process and Apparatus for Treating Metallic Articles. Lars G. Nilson, Hoboken, N. J. Filed July 25, 1918.

1,335,481. Grater. David P. Cera, Junction, Wis. Filed Jan. 10, 1920.

NEW PATENTS.



1,335,530. Culinary Appliance. Belle C. Sabin, Chicago, Ill. Filed July 18, 1919.

1,335,581. Permutation Lock. Albert G. Hockett, Cheyenne, Wyo. Filed July 12, 1917. Renewed Jan. 27, 1920.

1,335,591. Oil-Stove Chimney. Loren D. Mason, Kokomo, Ind., assignor of one-half to O. M. Myers, Kokomo, Ind. Filed Sept. 21, 1918.

1,335,598. Can-Opener. Louis Osmundson, Brooklyn, N. Y. Filed June 5, 1919.

1,335,611. Razor-Strop Protector. Milton C. Scott, Omaha, and John Riley Scott, Lincoln, Neb. Filed June 16, 1919.

1,335,615. Hammer. Harry E. Small, Norfolk, Va. Filed Mar. 18, 1919.

1,335,616. Brush-Holder. Perry N. Snyder, San Jose, Calif. Filed Jan. 27, 1919.

1,335,654. Broom. Solomon Cantor, New York, N. Y., and Hayman Gonen, Paterson, N. J. Filed Nov. 4, 1919.

1,335,724. Adjustable Holder. Andrew H. Carlson, Bridgeport, Conn., assignor to Presteel Mfg. Company, Bridgeport, Conn. Filed Nov. 8, 1919.

1,335,754. Operating Device for Washing-Machines. David D. Rullman, Omaha, Neb. Filed Jan. 18, 1918.

1,335,756. Roofing. Truman Merrill Scarff, Springvalley, Ohio. Filed April 22, 1915.

1,335,760. Stove. James G. Scott, Washington, D. C. Filed July 2, 1917.

1,335,813. Skate-Sharpener. George H. Berghman, Chicago, Ill. Filed Oct. 17, 1919.

1,335,840. Water-Carrying Attachment for Razors. Jacob F. Kaylor, Pekin, Ill. Filed Apr. 14, 1917.

1,335,847. Handle for Knives, etc. Paul Mertens, Newark, and Henry Backert, Irvington, N. J. Filed Jan. 22, 1919.

1,335,857. Combination Rack and Ironing-Board. Daniel W. Robbins, Metcalf, Ill. Filed June 9, 1919.

1,335,866. Flexible File. George F. Vorhauer, New Brighton, Pa., assignor to Walter D. Craft, Newark, N. J. Filed Sept. 25, 1919.

1,335,869. Gas-Burner and Body-Covering Therefor. John H. Ackroyd, Milford, Conn. Filed May 1, 1919.

1,335,878. Posthole-Digger. Winfield Scott Cronowert, Addie, Idaho. Filed Apr. 20, 1918.

1,335,957. Wringer Attachment. Louis F. Doellinger, Waterloo, Iowa. Filed July 31, 1919.

1,335,970. Match-Container. Hans Humm, Brooklyn, N. Y. Filed May 31, 1919.

1,335,999. Sash-Hinge. Charley Stover, Coats, Kans. Filed Dec. 8, 1917.

1,336,021. Electric Heater. Edmund N. Brown, San Francisco, Calif. Filed Oct. 1, 1919.

1,336,080. Lock. Jouzas Karasevich, South Amboy, N. J. Filed May 29, 1919.

1,336,087. Vise Attachment. Patrick F. O'Shaughnessy, Brooklyn, N. Y. Filed June 6, 1919.

1,336,088. Combined Cane and Fish-Rod. Thomas Porremba, Rome, N. Y. Filed July 24, 1919.

1,336,102. Bevel. John W. Smith, St. Helens, Ore. Filed Jan. 30, 1919.

1,336,103. Kerosene-Burner for Ranges. John W. Starr, Charleston, Wash. Filed Mar. 19, 1919.

1,336,126. Can-Opener. Gustav A. Carlson, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed June 26, 1919.

1,336,155. Tool-Holder. Leroy Q. Presby, Melrose, Mass., assignor to Clarence S. Luitwieler, Newton, Mass., and Frank W. Merrick, Boston, Mass. Filed Mar. 14, 1919.

1,336,186. Clothesline-Support. Frank Baron, New York, N. Y. Filed July 30, 1918.

1,336,193. Fastener. Edgar J. Bryan, Riverside, Calif., assignor of one-half to Fred Stebler, Riverside, Calif. Filed Oct. 9, 1916. Renewed Feb. 18, 1920.

1,336,200. Grinder. Charles M. Cook, Rochester, N. H. Filed May 12, 1919.

WEEKLY REPORT OF TRADE AND THE MARKETS

ACCUMULATION OF FINISHED STEEL PRODUCTS CONTINUES BECAUSE OF TRAFFIC CONDITIONS.

As a consequence of the railroad strike, traffic conditions are so unsatisfactory that the surplus of raw materials on hand is rapidly being exhausted without perceptible replenishment and stocks of finished products are accumulating at such an embarrassing rate that many plants have had to close down on account of limited storage facilities. Nearly all the Valley furnaces are banked and what few blast furnaces are still operating are doing so with a curtailment of production.

In the Pittsburgh valley and the lake front district the steel industry is suffering more than it was a week ago, when the strike was in full force. The Chicago and Buffalo districts are recovering at a faster rate, due to easier movements of coke from Connellsville. Recent movements of fuel by water and on roads where switching is unnecessary is responsible for the continued operation of those furnaces in the Pittsburgh region that have not been forced to bank.

In the Buffalo district conditions are improving and it is estimated in some quarters that production at mills and furnaces will be at pre-war basis within a week or two. However rate of production is so much better than shipping facilities that the mills are stacking their output and only the most urgently needed tonnages are being moved. Every endeavor is being made to take care of the old customers and new ones are suffering in consequence. The structural demand, which was extremely heavy before the strike, seems to have been discouraged and at present is very quiet.

As production of steel has been far greater than shipments, many strings of empties have been loaded during the past week or two and when transportation troubles have cleared away the increased volume of tonnage released and the forwarding of thousands of loaded cars to the consumer will go far toward relieving the shortage he is now suffering, if indeed it does not tax his storage facilities to the utmost. However, the trade is not looking for a sudden release as the elimination of congestion on the carriers will probably come about slowly.

STEEL.

It is reported that averaging the different products manufactured by the leading interest this concern is booked to capacity up to the middle of the first month of 1921. The leading independents have not formally opened their books for third quarter business, although it is believed that orders accepted from regular customers have considerably cut down the tonnage available for those months. Prices at which customers of the independents have been booked for third quarter

business in bars, shapes and plates are from \$2.90 to \$3 for bars per 100 pounds, \$3 to \$3.10 for structural shapes and from \$3.15 to \$3.25 for plates, while the spread in prices between the independents and the leading interest may be fairly gauged by \$2.35, \$2.45 to \$2.65, respectively, asked by the corporation. Smaller independents are realizing as high as \$4 for these products.

Demand for sheet bars continues in such volume that production is found to capacity in order to meet it. The independents' spread in price is \$70 to \$85, although the latter price has been asked unsuccessfully and probably \$75 to \$80 would more nearly describe the market. The leading interest still adheres to the old price of \$42.

COPPER.

The domestic copper market still shows the effect of the derangement of transportation caused by the railroad strike. Producers have not revised their prices for deliveries up to July and August. A few consumers continue to manifest interest in shipments after June and a small amount of business is being transacted.

While the larger domestic consumers satisfied their immediate needs last month, they are again feeling out the market by bids just under the producers' prices.

Improved transportation conditions on those railroads serving Connecticut have made shipments possible from the Long Island and Baltimore refineries to this region, but those in New Jersey are still unable to ship. The labor strike at the plants of the brass producers in Waterbury, Connecticut, still continues and 10,000 men are idle as a result. The employers are standing firm as a unit, but no formal demand has been made to them by the strikers yet. An eight hour day and a wage advance from 44 to 75 cents per hour is being asked.

The wire drawers of the Connecticut Valley are known to have orders on their books calling for capacity operation up to the late summer at least. These particular consumers followed a rather cautious buying policy in March fearing a runaway market for the metal, and their present inquiries show that they are worried lest they will not be able to anticipate higher copper prices.

Practically all authorities on the copper situation are of one mind in declaring that a demand is about to develop which will be in excess of the available supply of refined product.

TIN.

Because of unfavorable business conditions and light buying, the tin market shows gradual depression. The ups and downs in the rate of sterling exchange are reflected in the price variations. Shipping difficulties

continue almost as great as at any time since the railroad strike and consumption continues to suffer in consequence. The scarcity of spot tin in Chicago and the West remains unchanged.

LEAD.

Adverse transportation conditions still affect the lead market, as consumers can not depend upon deliveries and, therefore, hesitate to commit themselves. However, in view of the fact that stocks are accumulating in the hands of the producer and diminishing in those of the consumer, it is extremely probable that heavy buying will develop in the near future.

SOLDER.

No further advance in the prices of solder has taken place in the Chicago market. The present quotations are as follows: Warranted, 50-50, per pound, 41 cents; Commercial, 45-55, per pound, 38.30 cents; and Plumbers', per pound, 35.60 cents.

ZINC.

The domestic zinc market is reported as quiet and dull. Quotations remain practically the same. Buyers in general have a fair amount of metal contracted for and are only hampered by trouble in getting supplies through.

TIN PLATE.

The supply situation as far as requirements of perishable food are concerned appears to be somewhat easier in the tin plate market. Obligations of the tin plate manufacturers, however, are still very heavy and inquiries for tin plate are quite numerous. According to the Iron Trade Review, the railroad strike has had the effect of making available better supplies of box cars and a good many of them are being loaded, the leading interest having no less than 366 cars of sheets and tin plate in cars awaiting shipment. In addition to these stocks aggregating about 15,000 tons, this company has 55,000 tons of sheets and tin plate in its warehouses. Independent makers also have heavy stocks, but only in a few instances has the accumulation reached a point where mill operations have had to be suspended. Independent companies generally have taken no action with regard to prices for third and fourth quarter shipments but there is not much doubt that some of them will ask advances over the Steel corporation base of from 75 cents to \$1.50 per box on domestic business.

SHEETS.

From Pittsburgh comes the report that restriction on the shipments of freight and the shutting off of fuel supplies have brought down the operation of the sheet mills of the country to not more than 50 per cent of capacity. Hardly a ton of material is leaving any of the mills and those in a position to maintain operations merely are piling up finished material. No letup is noted in the general inquiry, but buyers do not appear to be quite so insistent for early tonnages as they were recently, probably because they realize that shipments are impossible under present conditions. While

in some lines production has not seriously suffered as a result of the transportation tieup, and the opinion is expressed that a breaking up of the railroad yardmen's strike this week may mean only a trifling loss in production, this can not be said of sheets. Sheet mills, if they have been able to secure fuel, have not been able to secure steel, or vice versa, and the past week was one of extremely low mill operations.

OLD METALS.

Wholesale quotations in the Chicago district which may be considered nominal are as follows: Old steel axles, \$33.00 to \$34.00; old iron axles, \$38.00 to \$39.00; steel spring, \$26.00 to \$27.00; No. 1 wrought iron, \$27.00 to \$28.00; No. 1 cast, \$37.50 to \$38.50; all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, 14 cents; light brass, 9 cents; lead, 6½ cents; zinc, 5½ cents; cast aluminum, 22½ cents.

PIG IRON.

The consumption of pig iron was not curtailed to the extent that production was and it will be impossible for producers to deliver all the tonnage promised for the first half of the year. In the Youngstown district 30 blast furnaces are down, 12 in the Chicago district and 10 in other parts. This totals a daily capacity of 20,000 tons or 20 per cent of the entire current production. The percentage of curtailment suffered by other producers and some furnaces that were banked, but not reported, will bring the figure up considerably—in fact, it is estimated by some that as many as 75 furnaces were down. The pig iron market is active, notwithstanding, and some 100,000 tons were sold during last week. Most of it was malleable and foundry, bringing \$46.25 and \$45. Coke is selling at from \$10 to \$12 and higher prices for iron are looked for. An inquiry for 5,000 to 10,000 tons of iron still remains unsatisfied.

According to the market report of Rogers, Brown and Company, Cincinnati, Ohio, the feature of the past week has been the railroad strike and the effect it has had on the production of pig iron and coke and the shipment of these products. It has emphasized more strongly than ever the fact that many foundries are running somewhat on a "hand to mouth" basis and it has only been by buying and swapping of raw materials that a number of foundries have been able to operate and even now there are many on the verge of a shut down unless the railroads permit shipments to move through promptly. A partial lifting of embargoes by some of the lines has given some relief, but more is necessary to bring about any appreciable change in the situation.

Under conditions like these, buying, to a certain extent, has been forgotten, the main anxiety of the buyers being to obtain deliveries on materials due or enroute to them. Despite this, there has been some buying of pig iron for spot and forward shipment and the total is very satisfactory considering the present condition of furnace order books. Virtually all coke consumers are under contract for at least a portion of their requirements over the remainder of this year.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS	LEAD	AUGERS.	BEATERS.
FIG IRON.	American Pig..... 9 75 Bar 10 00 Sheet. Full coils.....per 100 lbs. \$12 65 Cut coils.....per 100 lbs. 12 90	Boring Machine.40 @ 40&10% Irwin's25% Carpenter's Nat.50% Hollow. Bonney's.....per doz. 30 00 Post Hole. Iwan's Post Hole and Well...30% Vaughan's, 4 to 9 in.per doz. \$14 00 Ship. Ford's, with or without screwNet list	Carpet. Per doz. No. 7 Tinned Spring Wire..\$1 16 No. 8 Spring Wire cop- pered 1 50 No. 9 Preston 1 75 Egg. Per doz. No. 50 Imp. Dover.....\$1 10 No. 102 " " Tinned 1 35 No. 150 " " hotel.. 2 10 No. 10 Heavy hotel tinned 2 10 No. 13 " " " 3 30 No. 15 " " " 3 60 No. 18 " " " 4 50 Hand 8 9 10 12 Per doz. \$11 50 13 00 14 75 18 00 Moulders'. 12-inchPer doz. 20 00
FIRST QUALITY BRIGHT TIN PLATES. Per box IC 14x20....112 sheets \$15 80 IX 14x20..... 17 75 IXX 14x20..... 19 45 IXXX 14x20..... 20 90 IXXXX 14x20..... 22 15 IC 20x28..... 31 60 IX 20x28..... 35 50 IXX 20x28..... 38 90 IXXX 20x28..... 41 80 IXXXX 20x28..... 44 30	TIN. Pig tin.....68½¢ Bar tin.....70 ¢	AWLS. Brad. No. 3 Handled....per doz. \$0 65 No. 1050 Handled " 1 40 Shouldered, assorted 1 to 4,per gro. 4 00 Patent asst'd, 1 to 4 " 85 Harness. Common 1 05 Patent 1 00 Peg. Shouldered 1 60 Patented 75 Scratch. No. IS, socket handled.....per doz. 2 50 No. 344 Goodell-Pratt, list, less.....35-40% No. 7 Stanley..... 2 25	BELLS. Call. 3-inch Nickered Rotary Bell, Bronzed base...per doz. \$5 50 Cow. Kentucky30% Door. Per doz. New Departure Automatic \$7 50 Rotary. 3 -in. Old Copper Bell... 6 00 3 -in. Old Copper Bell, fancy 8 00 3 -in. Nickered Steel Bell 6 00 3½-in. Nickered Steel Bell 6 50 Hand. Hand Bell polished. List plus 15% White Metal..... " 15% Nickel Plated..... " 5% Swiss " 10% Miscellaneous. Church and School, steel alloys30% Farm, lbs..40 50 75 100 Each\$3 00 3 75 5 50 7 25
COKE PLATES. Cokes, 180 lbs.... 20x28 \$19 80 Cokes, 200 lbs.... 20x28 20 00 Cokes, 214 lbs....IC 20x28 20 70 Cokes, 270 lbs....IX 20x28 24 00	ADZES. Carpenters'. PlumbsNet Coopers'. Barton'sNet White'sNet Railroad. PlumbsNet	AXES. First Quality, Single Bitted, 3 to 4 lb., per doz. 15 50 First Quality, Double Bittedper doz. 20 50 Broad. Plumbs, West, Pat.....List " Can. Pat.....\$69 00 Firemen's (handled),per doz. 21 00 Single Bitted (without handles). Prices on application Warren Silver Steel..... Warren Blue Finished " " Double Bitted (without handles). Warren's Natl. Blue, 3½ to 4½ lb.. Prices on application The above prices on axes of 3 to 4 lbs. are the base prices.	BEVELS, TEE Stanley's rosewood handle, new listNets Stanley iron handle.....Nets BINDING CLOTH. Zincd55% Brass40% Brass, plated60% BITS. Auger. Jennings Pattern.....Net Ford Car.....List plus 5% Ford's Ship..... " 5% Irwin35% Russell Jennings.....plus 20% Clark's Expansive.....33½% Steer's " Small list, \$22 00..5% " " Large " \$26 00..5% Irwin Car35% Ford's Ship Auger pattern Car.....List plus 5% Center10% Countersink. No. 18 Wheeler's ..per doz. \$2 25 No. 20 " " 3 00 American Snailhead " 1 75 " Rose " 2 00 " Flat..... 1 40 Mahew's Flat..... 1 60 " Snail..... 1 90 Dowel. Russell Jennings.....plus 20% Gimlet. Standard Double Cut Gross \$8 40 Nail Metal Single CutGross \$4 00—\$5 00 Reamer. Standard Square.....Doz. 2 50 American Octagon... " 2 50 Screw Driver. No. 1 Common..... 40 No. 26 Stanley..... 75
BLUE ANNEALED SHEETS. No. 10.....per 100 lbs. \$5 27 No. 12.....per 100 lbs. 5 32 No. 14.....per 100 lbs. 5 37 No. 16.....per 100 lbs. 5 45	AMMUNITION. Shells, Loaded, Peters. Loaded with Black Powder,Less 18% Loaded with Smokeless Powder, medium grades,Less 18% Loaded with Smokeless Powder, high grade, Less 18% Winchester. Smokeless Repeater Grade,Less 15% Smokeless Leader GradeLess 15% Black Powder..... Less 15% U. M. C. Nitro Club.....18% Arrow18% New Club.....18% Gun Wads—per 1000. Winchester 7-8 gauge 10&7½% " 9-10 gauge 10&7½% " 11-28 gauge 10&7½%		
ONE PASS COLD ROLLED BLACK. No. 18-20.....per 100 lbs. \$7 80 No. 22-24.....per 100 lbs. 7 85 No. 26.....per 100 lbs. 7 90 No. 27.....per 100 lbs. 7 95 No. 28.....per 100 lbs. 8 00 No. 29.....per 100 lbs. 8 10	Powder Each DuPont's Sporting, kegs..\$11 25 " " ¼ kegs 3 10 DuPont's Canisters, 1-lb... 56 " Smokeless, drums 43 50 " kegs. 22 00 " ¼ kegs. 5 75 " canisters 1 00 Hercules "E.C." and "Infallible", 50 can drums.. 43 50 Hercules "E.C.", kegs..... 22 50 Hercules "E.C.", ½-kegs... 11 25 Hercules "Infallible", 25-can drums 22 00 Hercules "Infallible", 10 can drums 9 00 Hercules "E.C.", ¼-kegs... 5 75 Hercules "E.C." and "Infallible", canisters 1 00 Hercules W. A. 30 Cal. Rifle, canisters 1 25 Hercules Lightning Rifle, canisters 1 25 Hercules Sharpshooter Rifle, canisters 1 25 Hercules Unique Rifle, canisters 1 50 Hercules Bullseye Revolver, canisters 1 00		
GALVANIZED No. 16.....per 100 lbs. \$8 75 No. 18-20.....per 100 lbs. 8 90 No. 22-24.....per 100 lbs. 9 05 No. 26.....per 100 lbs. 9 20 No. 27.....per 100 lbs. 9 35 No. 28.....per 100 lbs. 9 50 No. 30.....per 100 lbs. 10 00			
WELLSVILLE POLISHED STEEL No. 18-20.....per 100 lbs. \$9 65 No. 22-24.....per 100 lbs. 9 75 No. 26.....per 100 lbs. 9 85 No. 27.....per 100 lbs. 9 95			
KEYSTONE HAMMERED POLISHED STEEL Discontinued. New product will be announced later.			
BAR SOLDER Warranted, 50-50per 100 lbs. \$41 00 Commercial, 45-55per 100 lbs. 33 30 Plumbers'per 100 lbs. 35 60			
ZINC. In slabs.....9c			
SHEET ZINC. Cask lots 14 ¢ Less than cask lots...14¼-14½¢	ANVILS. Solid Wrought.....23 & 23½ per lb.	BAGS, PAPER NAIL. Pounds... 10 16 20 25 Per 1,000...\$5 00 6 50 7 50 9 00 BALANCES, SPRING. Sight Spring.....Net StraightNet BARS CROW. Pinch or Wedge Point, per cwt.....\$8 00 to \$9 00 BASKETS. Clothes. Small Willow.....per doz. 15 00 Medium Willow... " 17 00 Large Willow..... " 20 00 Galvanized 1 bu. 1½ bu. Per doz.....\$16 08 \$18 72	
COPPER. Copper Sheet, base..... 29½¢	ASBESTOS Board and Paper, up to 1/16"17c per lb. Thicker18c per lb.		

CRAYONS—See Chalk.			ELBOWS—Conductor Pipe.			Wood Pails.			HANGERS.			
CUTTERS			Galvanized Steel, Tin and Terne, Round Corrugated.			Frazer's, 15 lb. \$1.00; 25 lb. \$1.50 each Hub Lightning, 15 lb. 90c; 25 lb. \$1.21 each.			Barn Door. U. S. Rolled Bearing.....12½% Matchless.....12½% Warehouse Tandem, No. 44.....33½%			
Glass.			Size.	Doz.		Tin Cans.			Conductor P.			
Woodward.....	40%		2-inch.....	60%		Frazer's			Iwan's Perfection.....45%			
Meat.			3-inch.....	60%		1½ lb. per doz.....\$1 75			Eave Trough.			
Enterprise—Nos. 5 10 12			4-inch.....	60%		3 lb. per doz.....3 25			All sizes, 5" or smaller,per gross, \$3 80 Net			
Each \$2 50 \$4 25 \$3 75			5-inch.....	60%					All sizes, larger than 5",per gross, 5 00 "			
Nos. 22 32			6-inch.....	60%					Garage Door.			
" 6 50 8 50			EMERY, TURKISH.			GRINDSTONES.			Right Angle.....50&10%			
Pipe.			Size.....	1-lb.	5-lb.	10-lb.	Family.			Sliding Folding.....50%		
Saunders', No. 1 2 3			Per pound.....	18c	14c	13c	Inches.. 7 8 10 12			Receding.....50%		
Each \$1 85 2 75 6 75			EYES.			Loose.			Parlor Door.			
Slaw and Kraut.	Per doz.		Bright Wire Screw—See Ooods, B. W.			Per ton.....			Acme.....per set, \$3 75			
4-knife Kraut.....	\$20 00-55 00		Drifting Pick......60, 10&5%			Price on application			Ives' Improved..... 3 40			
3-knife Kraut, 8x27 in..	13 00-18 00		Hooks and Eyes—			Mounted.			Lane's Standard..... 3 50			
1-knife Slaw.....	2 50		Brass, 1½" No. 60..			Ball Bearing..... 1 2 3			Lane's New Model... 3 10			
2-knife Slaw.....	3 00		Iron " " 50..			Each.....\$4 75 5 00 5 25			Le Roy Noiseless.....40&10%			
Washer.....	11 00		FASTENERS, STORM SASH.			GUN WADS.			Richards.....25%			
DAMPERS, STOVE PIPE.			Shroeder's.....per doz. \$1 50			(See Ammunition).			Advance.....40&10%			
Ideal			Sensible....." 3 00			GUNS.			HASPS.			
3".....	\$1 00		FILES AND RASPS.			Iver Johnson Champion Single			Hinge, Wrought..... Add 50% to list.			
4".....	1 00		Delta.....30%			Barrel Shot Guns.....Net Prices			With Staples—See Staples.			
5".....	1 15		Swiss.....List plus 25%			Double Barrel, Hammerless..			HATCHETS.			
6".....	1 25		Utility....." net.			Brad.			Crescent.....50%			
7".....	2 20		Nicholson's—			Common.....per doz. \$0 35			Cast Claw.....per doz. \$1 50@1 85			
8".....	3 75		American.....60%			Peg.			Cast Shingling... 1 50@1 85			
10".....	6 00		Arcade.....50-10-74%			Patent, plain top...." 80			Germantown.....7½%			
DIES AND STOCKS.			Black Diamond.....50&5%			Patent, leather top... " 90			HAY KNIVES.			
Discount.....	New List		Eagle.....50-10-74%			Sewing.			See Knives.			
DIGGERS.			Great Western.....50-10-74%			Common....." 24			HAY RACK BRACKETS			
Post Hole.			Kearney & Foot.....50-10-74%			Patent....." 55			Wenzleman's No. 1 per doz. sets, \$18 00			
Eureka.....	per doz. \$14 50		McClellan.....50-10-74%			Hammers, Handled.			Wenzleman's No. 2 " " 19 20			
Iwan's Split Handle (Eureka)	15 00		Nicholson brand.....50&7½%			each, net.			Blind.			
7-ft. ".....	20 00		J. Barton Smith.....50&2½%			Blacksmiths, Hand, No. 0, 26 oz. \$1 35			Clark's Gravity			
Iwan's Perfection (Atlas) "	15 50		X-F Swiss Pattern.....Net list.			Engineers', No. 1, 26 oz.....1 35			No. 1....." " 5 75			
Iwan's Hercules pattern "	18 00		Simonds'.....50%			Farriers', No. 6, 7 oz.....1 41			No. 3....." " 5 75			
See also Augers—Post Hole.			Diaston's.....50&10%			Machinists', No. 1, 7 oz.....1 06			Gate.			
Dividers, Wing.....	25%		Heller's.....60&10%			Nail.			Clark's..... 2 3			
DOOR CHECKS—See Checks.			Barley.			Vanadium, No. 4½, 16 oz.,			Hgs & Ltch, doz. \$5 50 7 00 9 75			
DOORS, SCREEN.			Steel, new list.....New Prices			each.....\$2 00			Hinges only " 4 75 5 50 8 00			
½-in. 4-panel, painted.....	Net Prices		Hay.			V. & B., No. 11½, 16 oz., each. 1 60			Latches only. 1 90 1 90			
1½-in. 4-panel, painted.....	"		2-time.....New prices			Garden City, No. 11½, 16			Screen Door.			
1½-in. 3-panel, natural pine,	"		3- ".....New prices			oz., each.....1 35			Cast Iron.....gross \$10 00			
fancy.....	"		4- ".....New prices			Tinner's Riveting, No. 1, 8 oz.,			Steel....." 7 00			
DOOR HANGERS—See Hangers.			Digging.....New prices			each.....1 10			Spring.			
DRILLS.			Scoop.....New prices			Shoe, Steel, No. 1, 13 oz., each.. 1 00			Chicago.....Add 12½% to list.			
Blacksmiths' Twist. (New List)....	40%		Header.			Tack			Columbia Dbl. Acting...40&10&5%			
Breast.			3-time.....New prices			Magnetic.			Gem.....25%			
Millers Falls No. 12.....	Each, \$46 00		4- ".....New prices			No. 5, each.....\$1 00			Ideal Detachable..per gro. \$11 00			
" 112.....	26 00		Manure.			Heavy Hammers and Sledges.			Matchless.....40%			
Hand.			4-time.....New prices			Under 5 lbs.....50%			New Idea.....per gro. \$7 20			
Goodell's Automatic.			FREEZERS—ICE CREAM.			5 lbs. and over.....50&10%			Oxford.....20%			
Nos. 01 03			White Mountain 1-quart.....@			Masons'.			Wrought Iron.			
Per doz. 12 00 14 40			" " 2 ".....@			Single and Double Face.....50%			New Lists.....			
Goodell's Single Gear, per doz. 15 75			" " 4 ".....@			HANDLES.			Light Strap Hinges.....5&5%			
Goodell-Pratt No. 4½ per doz.			" " 6 ".....@			Auger.			Heavy Strap Hinges.....20&7½%			
list, less.....	30%		Arctic.....1 ".....@			Common Assorted...per doz. \$0 75			Light T Hinges.....List plus ½%			
Goodell-Pratt No. 379 per doz.			" " 2 ".....@			Pratt's Adjustable, Nos. 1 & 2,			Heavy T Hinges.....List plus 4%			
list, less.....	30%		" " 4 ".....@			per doz.....6 00			Extra Heavy T Hinges.....15&5%			
Reciprocating.			" " 6 ".....@			Ives' Adjustable.....per set, 1 35			Screw Hook and Strap.			
Goodell's.....	per doz 26 00		GAUGES.			Axe.....30%			6 to 12 in.....per 100 lbs. \$7 75			
DRIVERS, SCREW.			Cream Pail.			HANDLES.			14 to 20 in....." 7 50			
Standard.....	Nets		Fairmount.....per doz. \$3 75			Auger.			22 to 36 in....." 7 25			
Lock Ferrule.....	"		Marking, Mortise, etc.....Nets			Common Assorted...per doz. \$0 75			Screw Hook and Eye.			
Champion.....	"		Wire.			Pratt's Adjustable, Nos. 1 & 2,			½ in.....per doz. pair \$2 60			
Champion Pattern.....	"		Disston's.....25%			per doz.....6 00			¾ in....." 3 50			
Clark's Interchangeable.....	"		GIMLETS.			Ives' Adjustable.....per set, 1 35			¾ in....." 5 00			
Edison.....	"		Discount.....35@40%			Chisel.			Awning, No. 60.....per gro. 50%			
Reed's Lightning.....	"		Bulk.			Hickory, Tanged, Firmer, Assorted,			Bel.			
Goodell's Spiral.....	"		B Amber.....per lb. 35c			55c; Large, 85c per doz.			Brown's.....70&5%			
Yankee Ratchet.....	"		A White.....40c			Hickory, Socket Firmer, Assorted,			Jones'.....6&5%			
" Spiral.....	"		H. S. Amber.....32c			70c; Large size, 80c per doz.			Fench.			
EAVES, TROUGH.			Liquid.			Coal Pick.....40%			See Staps. Bench.			
55-2½% off Standard List.			Army & Navy.....40%			Drifting Pick.....40%						
ELBOWS—Stove Pipe.			Le Page's—			File, assorted, 30c; Large, 35c per doz						
1-piece Corrugated, Uniform.			List "A".....37½%			Hammer.						
5-inch.....	\$1 85		List "B".....33½%			Adze Eye.....per doz. 40 to \$1 00						
6-inch.....	1 90		List "C".....25 %			Blacksmiths'... 45c@1 00						
7-inch.....	2 20		GREASE, AXLE.			Machinists'... 50c@1 00						
Uniform, Collar Adjustable			Wood Boxes.			Hay and Manure Fork.....25%						
5-inch.....	\$2 40		Frazer's.....per gro. \$13 00			Screw Driver.						
6-inch.....	2 45		Hub Lightning.....7 50			Assorted....." 6						
7-inch.....	2 75					Large....." 9						

Box. Inch..... 5 7 10 12 Per doz...\$2 50 2 75 3 25 3 85				Standard, Nos..... 1 2 Each.....\$0 60 1 00				LINING, STOVE. Bricks.....per crate, 42c				NAIL PULLERS. See Pullers.			
Bush. Common Axe Handle, per doz.\$22 00				R-W Big Lift.....40% Tiger.....40%				LOCKS. Barn Door. No. 60 Stearns.....per doz. \$10 00 No. 80 "....." 17 50				NAIL SETS. See Sets.			
Chain. Inch. 1/4 1/2 3/4 1 Pr 100 \$7 60-8 10 9 75 11 50 12 60				KETTLES. Brass.....15% Cauldron.....40% Copper.....per lb. 27 Maslin.....40% Sugar.....50%				MACHINES. Riveting. Stearns No. 1.....per doz. \$12 00 Tenoning. No. 50 Peace's Spoke...each \$11 50				NETTING, POULTRY. Galvanized before weaving.....50% Galvanized after weaving.....45%			
Clothes Line. Japanned.....per doz.48c @ 1 40 Galvanized....." 75c @ 2 50				KNIVES. Beet Topping. Clyde, 9-in. Scimitar Blade, dz. \$3 85 California.....3 40 Butcher. Beechwood Handles, 6" blade..\$4 00 " 7" " 4 65 " 8" " 5 65 Cooper's Hoop.15%				MAIL BOXES. See Boxes.				NIPPERS. End Cutting. Stubb's Pattern, Inches. 5 6 Per dozen.....\$4 65 6 75 End and Diagonal Cutting. Swedish Side. Inches. 5 6 Per dozen.....\$4 50 5 75			
Coal and Hat. Common Wire....per gro. 1 25-1 65				Corn. Common, riveted, painted red.....per doz. Nets Little Giant....." "				MALLETS. Carpenters'. Fibre Head, No. 2, per doz. \$16 50 " No. 3 " 19 50 " No. 4 " 28 50 Round Hickory....." \$3 00-5 00 " Lignumvitae.. " 6 25-10 50 Square Hickory....." 3 50-5 50 " Lignumvitae.. " 8 00-12 00				Hoof. Heller's.....40% V. & B., No. 52, each.....\$2 25			
Conductor. Iwan's Tinned Sickle.....List.				Corn. Clipper.....per doz. \$1 75 Disston's.....2 75 Earle's.....3 00 Woodford.....2 25				Finners'. Hickory....." 2 25				NOZZLES. Hose. Magic.....per doz. \$9 50 Diamond....." 5 75			
Grass. Common Nos. 1 3 5 7 Per doz...\$4 50 3 50 3 75 3 25				Drawing. Standard.....List & 5% Adjustable.....15% Barton's Carpenters'.....15%				MATS. Door. National Rigid.....50% Acme Steel Flexible.....50%				NUTS, HOT PRESSED. Square Tapped. \$1.85 off per 100 lbs. Hexagon Tapped. \$1.85 off per 100 lbs.			
Hammer. With plate.....per doz. 1 10 With screw....." 1 00				Hay. Iwan's Solid Socket.....doz.\$13 00 Heath's.....13 00 Iwan's, Sickle Edge.....18 00 Iwan's, Imp'd Serrated.....18 00				Plumbs. No. 2.....per gro. Nets No. 1....." " No. 1 Asbestos Toasters, or wire-covered Stove Mats, with handle.....per doz. 1 10 No. 2 Asbestos Toasters, with ring.....per doz. 60				OILERS Chase Pattern. Brass and Copper.....10% Zinc.....33 1/2% Engineers'. Tin.....per doz. \$7 00 @ 9 00 Machine. Common.....per doz. \$0 85			
Lambrequin, or Drapery, per gro. 30c				Hedge. Challenge.....per doz. \$6 00 Disston's.....3 75				MAULS. Iron, lbs. 10 13 16 18 Per doz.....Prices on Application Wood Face, lbs. 10 12 14 Per doz.....Prices on Application Wood Choppers'. Lake Super'r & Oregon Pat. 40% & 5%				OPENERS. Box. See Box Chisels Can. Delmonico.....per doz. \$1 30 Never Slip....." 65 Crate. V. & B....." 7 25-11 00			
Picture.50% @ 50% & 10%				Mining. Common, Single....." 60 Common, Double....." 90 Streeter, 4-blade....." 1 30 Streeter, 6-blade....." 2 00				MEASURES. Galvanized, doz.....Nets Japanned, doz.....Nets				OUTFITS, COBBLING Combination.....per doz.\$16 00 Economy....." 8 50 Family....." 14 50			
Potato and Manure.Nets				Putty. Common.....per doz. \$0 75 @ 1 50 Lander's....." 1 75 @ 2 50				MILLS, COFFEE. Enterprise.....16 1/2% Parker.....50% & 5% Arcade.....40-10%				PAIRS. Cream. 14-qt., without gauge, per doz. \$9 50 18-qt., " " " 11 00 20-qt., " " " 11 75			
Screw. Brass.....70%				Scraping. Beech Handle.....90 @ 1 10 Lander's.....5 50 @ 6 50				MITRE BOXES. See Boxes.				Sap. 10-qt., IC Tin.....per doz. \$4 00 12 " " " 5 50			
(See Goods, Bright Wire.)				Doors. Mineral.....per doz. \$1 80 Porcelain....." 1 90 Jet....." 2 00				MOPS. Cotton. Star (Cut Ends). Pounds 12' 15' 18' 24'-3 oz. Per doz. \$4 50 5 65 6 75 9 00				Stock. Galv'd qts. 14 16 18 20 Per doz...\$9 75 10 75 12 75 14 50			
Seat Spring.per lb. 5 1/2c				Ladders. Common Long. Per ft.....17c @ 23c Extension. Per ft.....22 to 28 Step. Common, per ft.....23c Common, with Shelf, add 10c.....34c IXL.....55c Challenge, 6 to 9 ft.....55c 10 to 16 ft.....60c				LANTERNS. Bull's Eye Police. 3 in. Flash Light...per doz. \$13 00				Water. Galvanized, qts. 10 12 14 Per doz...\$5 75 6 50 7 25			
HOSE, GARDEN. Per ft. Guaranteed 3 ply 1/2 inch.....16 c " 4 ply 1/2 inch.....18 1/2c " 5 ply 1/2 inch.....13 1/2c				Knobs. LANTERNS. Bull's Eye Police. 3 in. Flash Light...per doz. \$13 00				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
COTTON COV. RUBBER HOSE. High Grade Apache 1" guar. press. 400 lbs.....40c				Leaders, Cattle. Nos..... 51 52 Per doz.....\$1 35 1 45				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
HUSKERS. Nos..... B E Per doz.....New Nets No. 59.....per doz. New Nets				Leather, Lace. Rawhide 1".....100 ft. \$2 60 " 1 1/2".....4 40				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
IRON, PIG. See Metals.—First column.				Leathers, Pump. Valve and Plunger.....10%				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
IRONS. Curling. C.....per doz. \$4 40 B....." 50 A....." 58 Princess....." 1 25 Thelma....." 1 25 Pinkie....." 1 00				Lifters. Stone Cover. Coppered.....per gro. \$3 25 @ 5 50 Alaska.....8 00 Alaska.....10 00				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Plane. Wood Bench.....Add 10% to list				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Sad. Charcoal.....per doz. \$11 00 Common, polished, per 100 lbs. 7 75 No. 70 Asbestos.....\$1 50 net No. 100.....1 75 net Common, nickel plated.....8 25 Mrs. Pott's. No. 50 J. Enterprise, per set, Nets No. 55 J. " " " " No. 50 T. " " " " No. 55 T. " " " " Tailors' Sad.....per lb. " Tailors' Goose....." "				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Single Duck Nest.per doz. \$5 25				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Double Duck Nest." 6 25				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Sutton.each 2 60				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
JACKS. Locomotive.....30%				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Wagon. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Oliver. Nos..... 0 00 Each.....\$0 60 \$0 80				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Oliver. Nos..... 0 00 Each.....\$0 60 \$0 80				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Oliver. Nos..... 0 00 Each.....\$0 60 \$0 80				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Oliver. Nos..... 0 00 Each.....\$0 60 \$0 80				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Oliver. Nos..... 0 00 Each.....\$0 60 \$0 80				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Oliver. Nos..... 0 00 Each.....\$0 60 \$0 80				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Oliver. Nos..... 0 00 Each.....\$0 60 \$0 80				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
Oliver. Nos..... 0 00 Each.....\$0 60 \$0 80				Lines. Chalk. Twisted in 20-ft. hanks. Nos. 4 6 7 8 9 Gro.....Prices on Application Twisted in 50-ft. balls. Nos. 1 2 3 4 Per doz.....Prices on Application Braided in 20-ft. hanks. Nos. 0 1 2 3 Per doz.....Prices on Application Mason's....." "				WAGON. Richard's No. 1.....per doz. \$15 50 Miller.....20 00				Wrapping. Express.....100 lbs. Nets			
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PARERS		TINNERS.		PUNCHES.		SAWS.	
Apple.		Hollow.....Net list		Conductors.		Band.	
Goodell's.....per doz. \$10 80		Solid.....each, 10c		No. 22.....per doz. \$3 00		E. C. Atkins & Co. Prices on applic'n	
Turntable....." 11 10				Machine.....per lb. 25		Disston's.....Prices on applic'n	
White Mountain....." 8 40				Saddlers'.		Buck.	
Reading, No. 78....." 11 40				Common.....per doz. 1 50 to 5 00		Disston's.....Prices on applic'n	
Potato.		PLUMBS AND LEVELS.		Revolving Spring.		E. C. Atkins & Co. Prices on applic'n	
Goodsell's Saratoga, 10 1/2 in., dz. 6 50		Common.....Nets		Stearns, No. 10.....per doz. \$ 6 25		Disston's.....Prices on applic'n	
Goodsell's Saratoga, 5 in., dz. 5 50		Cook's.....40%		" No. 40....." 12 00		Hiles'.....New nets	
		Davis' Iron.....25%		" No. 60....." 16 00		Circular.	
		Davis' Inclinator.....15%		PUTTY.		E. C. Atkins & Co. Prices on applic'n	
PICKS.		POINTERS, SPOKE.		Strictly pure.....per 100 lbs. \$4 25		Disston's.....Prices on applic'n	
Adz, Eye Ore.....22 1/2%		Stearns' No. 1.....per doz. \$ 8 00		RAIL.		Coping.	
Drifting and Poll Picks.....22 1/2%		No. 2....." 10 00		Barn Door.		E. C. Atkins & Co. Prices on applic'n	
Plumbs, Railroad.....22 1/2%		POKERS, STOVE.		Matchless, 1-in.....5c		Disston's.....Prices on applic'n	
Surface.....22 1/2%		Wrt Steel, str't or bent per doz. \$0 75		Matchless, 1 1/2-in.....7c		Cross-Cut.	
		Nickel Plated, coil han'l's " 1 10		Storm King.....5c		E. C. Atkins & Co. Prices on applic'n	
				Sliding Door.		Disston's.....Prices on applic'n	
				Bronzed wrought iron...per ft. 8 1/2c		Dehorning.	
PINCERS.		POLISH.		RAKES.		Disston's.....Prices on applic'n	
Carpenters', cast steel.		Metal.		Garden.		E. C. Atkins & Co. Prices on applic'n	
No. 6 8 10 12		Wizard, 6 oz.....per gross \$18 00		Steel, Bow, 12-inch Teeth....\$8 50		Disston's.....Prices on applic'n	
Each.....\$0.63 .80 1.05 1.15		" 1 pt....." 20 40		Steel, Bow, 14-inch.....9 25		Hack.	
Blacksmiths'.....45%		" 1 pt....." 36 00		Malleable Iron, 12-in. " 4 75		Disston's.....Prices on applic'n	
Heller's.....40%		" 1 qt....." doz. 6 00		Malleable Iron, 14-in. " 5 00		Hand and Rip.	
PINS.		" 1 gal....." 10 80		Hay.		E. C. Atkins & Co. Prices on applic'n	
Common...per box of 5 gro. \$0 95		" 1 gal....." 18 60		Wood, 10 Teeth.....\$4 00		Disston's No. 7...Prices on applic'n	
Pickel.		Stove.		Lawn.		Disston's Nos. 8, D8, 12, 76, 112,	
Pluted, 15-in.....per doz. \$1 10		Black Eagle, Paste 5 oz....\$13 80		20 Teeth.....per doz. \$5 50		D100, and 120...Prices on applic'n	
Pluted, 21-in....." 1 60		" " " 1 lb....17 40		RASPS—See Files.		Keystone.	
Spiral....." 1 90		" " " 5 lbs. per case.....5 25		RAZORS—SAFETY.		E. C. Atkins & Co. Prices on applic'n	
PIPE.		Black Eagle Liquid, 6 oz. per gross.....15 60		Gillette.....per doz. \$45 00		Disston's.....Prices on applic'n	
Conductor.		Black Kid Paste, 5 lbs. per case 6 00		Auto Strop....." 45 00		Miter Box.	
Plain Round and Round Corrugated.		Black Jack Liquid 1/2 pt. per gross.....15 60		Gem....." 8 40		E. C. Atkins & Co. Prices on applic'n	
29 Gauge.....65%		Black Jack Paste #10 per gross 13 20		Gem (3 doz. lots)....." 8 00		Disston's.....Prices on applic'n	
28 ".....55%		FIRE POTS.		Ever Ready....." 8 40		Panel.	
26 ".....45%		Clayton & Lambert's, each \$4 00@6 00		Ever Ready (3 doz. lots)....." 8 00		E. C. Atkins & Co. Prices on applic'n	
24 ".....20%		Gate City.....each, 6 25		RAZOR STROPS.		Disston's No. 7...Prices on applic'n	
Square Corrugated A and B and Octagon.		Gem.....each, \$6 75@8 50		Star (Honing).....50%		Patternmakers.	
29 Gauge.....50%		POWDER.		REGISTERS.		E. C. Atkins & Co. Prices on applic'n	
28 ".....45%		See Ammunition.		Cast Iron.....10%		Disston's.....Prices on applic'n	
26 ".....35%		PRESSES, FRUIT AND JELLY.		Steel and Semi-Steel.....20%		Pruning.	
24 ".....15%		Enterprise Manufacturing Co....25%		Solid Brass or Bronze Metal prices on application.....20%		Disston's.....Prices on applic'n	
Galvanized Toncan Metal, Genuine O. H. Iron, Lyonore Metal, Charcoal Iron and Keystone C. B.		PRIMERS.		Paseboard.....20%		Stairbuilders.	
Plain Round and Round Corrugated		See Ammunition.		Adjustable Ceiling Ventilators.....20%		E. C. Atkins & Co. Prices on applic'n	
28 Gauge.....50%		PRUNERS.		REGISTER PAGES.		Disston's.....Prices on applic'n	
26 ".....40%		Diaston's Pole.....per doz. \$18 00		Jepanned, Bronzed and Plated.		Wood.	
24 ".....15%		Water's Improved....." 60%		4x6 to 14x14.....20%		E. C. Atkins & Co. Prices on applic'n	
Square Corrugated A and B Poly and Octagon.		PULLERS.		14x14 to 38x42.....40%		Disston's.....Prices on applic'n	
28 Gauge.....45%		Cork.		REVOLVERS.		SAW BUCKS—See Bucks.	
26 ".....35%		Daisy.....each, \$3 10		Iver Johnson Safety Automatic Hammer.....New Nets		SAW SETS—See Sets	
14 and 16 oz. Copper, all designs.....20%		Phoenix....." 1 40		I. J. Model 1900....."		SAW TOOLS—See Tools.	
Portico Elbows.		Quick and Easy....." 2 70		RINGS AND RINGERS.		SAW FRAMES.	
Galvanized and Terne Steel.		PULLEYS.		Cull.		Common, plain.....per doz. \$1 50	
1-inch.....45%		Awning—Jap'd.....10%		Copper.....2 1/2-in. 3-in.		Common painted....." 2 10	
1 1/2-inch.....45%		Clothes Line.....10%		Per doz.....\$2 40 \$2 65		SCALES.	
1 1/2-inch.....45%		Hay Fork.		Rea's Improved Self-Piercing copper, doz. 3 40		Counter.	
2-inch.....45%		Iron Wheel, 5-in.....per doz. 2 50		Steel, per doz.....1 50 1 80		Pelouze.....40&10%	
Tubing.....40%		Wood Wheel, 6-in....." 2 65		Hog.		SCISSORS.	
Discounts on Round apply on sizes 2 inch to 6 inch inclusive.		Wood Wheel, 6-in., pass knot,.....per doz. 3 00		Blair's Rings.....per doz. \$ 75		Star.....60%	
Freight allowed on 15 dozen or more Less than 15 dozen F. O. B. Factory		Sash.		Blair's Rings....." 1 00		SCOOPS.	
Terms: 30 days net, 2% ten days.		Common.....Net		Brown's Rings....." 72		Grain.	
Standard Gauge Conductor Pipe, plain or corrugated.		Common-Sense, 2-in.....Net		Brown's Rings....." 1 00		1/2 bu. "Hercules".....per doz. 3 70	
Not Nested.....40%		Empire Pattern, 2-in.....Net		Hill's Rings....." 1 00		1-bu. "Hercules"....." 5 00	
Nested solid.....45%		Ideal.....Net		Hill's Ring, boxes....." 72		SCRAPERS.	
Stave.		Steel.....Net		Major Rings....." 60		Box.	
29-Gauge, 3-inch.....Per 100 joints \$19 00		PUMPS.		Perfect Rings....." 1 50		Triangular, No. 6.....per doz. \$6 25	
" 4-inch.....19 50		Pitcher Spout.		Wolverine Rings....." 1 65		Road.	
" 5-inch.....20 25		Nos. 1 2 3 4		Wolverine Rings....." 1 10		Cubic ft. 7 5 3	
" 6-inch.....21 00		Each.....Nets		FRUIT JAR.		With runners, ea. \$7 00 6 50 6 20	
" 7-inch.....23 00		PLANES.		White.....per lb.....30c		SCREEN DOOR HINGES.	
T-Joint Made-up.		Stanley Iron Bench.....net		Key.		Cast iron.....gross, \$13 00	
6-inch.....per 100 \$50 00		PLATES, TIN		Split, round.....per doz. \$0 17		Steel....." 9 50	
Furnace Pipe.		See Metals in Column 1.		Split, square....." 32		SCREWS.	
Double Wall Pipe and Fittings 20%		PLIERS.		Ball, round....." 40		Bench.	
Single Wall Pipe, Round Pipe		Common.....Net		RIVETS.		Iron, ins. 1 1 1/2 1 3/4 1 1/2	
Fittings.....15%		Empire Pattern, 2-in.....Net		Copper Belt.....Add 15% to list		\$6 82 7 87 9 45 16 80	
Galvan'd and Black Iron Pipe, Shoes, etc.....15%		Ideal.....Net		Coppered Iron.....30%		Wood, white maple...per doz. 6 00	
		Steel.....Net		1 inners.....30%		Hand—Wood.....50%	
		PUMP.		Slotted Clinch.....per doz. 60c@1 10		Hand Rail.....22 1/2%	
		Nos. 1 2 3 4		RIVET SETS.		Jack.....20%	
		Each.....Nets		See Sets.		Lag or Coach—all sizes, gimlet pointed.....45-5%	
Cutting.		Flat and Round Nose.		ROPE.		Saw—Centennial.	
Bernard's.....New Prices		Bernard's.....New Prices		Cotton.		Nos. 1 2 3 4	
Lodi.....New Prices		Lodi.....New Prices		1, 5-16 in. Com. on reels, per lb.....85c		Per doz.....47c 55c 75c 90c	
Paragon.....New Prices		Paragon.....New Prices		1, 5-16 in. Com. in coils.....85c		Wood.	
Fencing.		Rules.		Sisal		P. H. Bright.....70-10-10%	
Black Bull.....All Nets		Prices on application		1st Quality.....19 1/2c		R. H. Blued.....65-10-10%	
Farmers' Choice.....All Nets		Lufkin's Hickory Board....."		No. 2.....17 1/2c		F. H. Jap'd.....62-10%	
Russell's.....All Nets		Lufkin's Log....."		Pure Manila.		F. H. Brass.....60&15%	
		Lufkin's Boxwood....."		1st Quality, base.....per lb. 28 1/2c		R. H. Brass.....57&15%	
		Lufkin's Zigzag....."		Hardware Grade.....per lb. 27 1/2c		R. H. Nickel Plated.....57&10%	
				SCYTHES.		Clipper, Grass.....per doz. \$13 50	
						Honest Dutchman....." 13 70	

SETS.		SQUARES.		TAPES, MEASURING.		WARE.	
Nail.		Steel and Iron.		Asses' Skin.		Glue Pots.	
Square head..... per doz. \$1 25		(Add, for bluing, \$3.00 per doz., net.)		Lufkin's Steel..... List & 40%		Tinned..... Add 15% to list	
Cup point, knurled.. " 1 15		Try.....		Lufkin's Metallic..... Prices on applic'n		Enameled..... 30%	
Rivet.		Try and Bevel.....		Lufkin's Pocket..... Prices on applic'n		WASH BOARDS—See Boards.	
Farmers'..... per doz. \$2 10		Try and Miter.....		THERMOMETERS.		WASHERS.	
Tinners'..... 25%		Fox's..... per doz. \$6 00		Tin Case..... per doz. 80c @ \$ 1 25		Standard O. G. cast iron... per lb. 3 1/2	
Saw.		Winterbottom's..... 10%		Wood Back..... " \$2 00 @ 12 00		Wrought steel in 5-lb. boxes, per lb.: In. 3/16 1/2 5/16 3/4 1 1 1/2 1 3/4 2	
Aiken's Pattern..... per doz. \$6 50		SQUEEZERS, LEMON.		Glass..... " 12 00		18c 16c 15c 13c 12c 11 1/2c 11c 11c 11c	
Disston's Monarch... " 7 20		Common Wood..... per doz. \$0 70		TIES.		WEDGES.	
Disston's X-Cut..... " 13 50		Porcelain Lined, Wood. " 1 25		Bale.		Ax..... per doz. Nets	
Leach's..... " 80		Boss, malleable iron. " 1 20		Single Loop, carload lots..... 75 & 7%		Galling..... per lb. "	
Nash's Hand..... " 3 15		Iron frame, porc'n bowl " 1 90		" less than car lots 70 & 15%		Saw..... " 8 1/2	
Nash's X-Cut..... " 4 20		Iron Frame, glass bowl.. " 2 35		TOOLS, SAW.		WEANERS.	
Stillman's Lever..... " 1 30		Little Giant, tin'd iron. " 4 00		Disston's Universal..... 40%		Calf.	
Stillman's X-Cut..... " 2 50		Drum, japanned..... " 3 60		TRAPS.		Fuller's, per doz. \$2 00 to \$2 50	
Whiting Pattern, No. 21 " 5 75		Drum, nickel plated.... " 4 50		Game with Chains. Per doz.		Tyler's Safety, per doz. 1 85 to 2 40	
Eccentric Anvil, Hand, No. 395, N. P. Morrill Pattern, per doz. 11 50		STAPLES.		Victor No. 1..... \$2 01		Carroll's, per doz. 3 00 to 3 75	
SHARPENERS, SKATE.		Blind.		Onesida Jump No. 1..... 2 75		Hoosier, per doz. 3 50 to 4 60	
Diamond..... per doz. \$1 60		Barbed..... per lb. 21 @ 22c		Newhouse No. 1..... 5 62		Shaw Perfected..... 3 00 to 3 75	
Perfect..... 1 20		Butter Tub..... " 16 @ 19c		Mouse and Rat. Net per gross		WEIGHTS.	
SHEARS.		Fence—		Out O'Sight Mouse..... \$ 8 00		Hitching..... per lb. Nets	
Per Doz.		Polished..... per 100 lbs. \$5 45		" " Rat..... 15 00		Sash—f.o.b. Chicago	
Nickel Plated, Straight, 6"..... \$12 90		Galvanized..... " 6 15		" " Mole..... 100 00		Ton lots, per ton..... \$60 00	
" " " 7"..... 14 85		Netting.		#44 Pocket Gopher..... 20 00		Smaller lots, per ton..... 63 00	
" " " 8"..... 16 30		Galvanized..... per 100 lbs. 6 50		Victor Mouse..... 2 60		WHEEL BARROWS.	
Japanned, Straight 6"..... 11 00		Wrought.		Hold Fast Mouse..... 2 60		No. 4 Tubular Steel..... @ \$7 25	
" " " 7"..... 12 40		Wrought Staples, Hasps and		Victor Rat..... 11 00		Common Tray or Stave Tray @ 2 75	
" " " 8"..... 13 80		Staples, Hasps, Hooks and		Hold Fast Rat..... 11 00		Angle leg, garden..... @ 4 "	
Tinners'—See Snips.		Staples, and Hooks and		Official Rat..... 13 50		WHEELS.	
SHEAVES, SLIDING DOOR.		Staples..... 50 & 10%		Wood Choker Mouse, 4 Holes 11 00		Carborundum..... 50%	
Common.		Extra heavy..... 35%		TROWELS.		Emery..... 60%	
Inches... 3 4 5		STEELYARD.		Brick.		Well, Ins..... 8 10 12	
Per set..... \$1 40 1 75 2 40		Discount 25%.		Clover Leaf..... 30%		Per doz..... \$5 50 7 25 8 50	
Hatfield's.		STONES.		Brade's..... 15 & 5%		12 in. heavy hoisting, per doz. \$25 00	
Per set..... \$1 80 2 10 2 75 25		Hindustan..... per lb. New Nets		Diaston's..... 30%		WIRE.	
SHELLS—See Ammunition.		Washita..... " "		Plasterers'.		In coils..... Nets	
SHELLERS, CORN.		Emery.		Clover Leaf..... 40%		In 1-lb. spools, new list..... Nets	
Union..... per doz. \$6 75		No. 126..... per doz. New Nets		Diaston's..... 25%		Broom—Tinned..... Nets	
SHIELDS.		Oil—Mounted.		W. & McP..... Net		Cable—Same price as Barbed Wire.	
Expansion Bolt Shields..... 60%		Arkansas Hard No. 7 per doz. New Nets		TRUCKS.		Copper.	
SHOES.		Arkansas Soft..... " "		Bag..... each, \$3 75		In coils..... Nets	
Conductor..... 60%		Washita No. 717... " "		Warehouse or store.		1-lb. spools, new list..... Nets	
SHOT—See Ammunition.		Oil—Unmounted.		No 1, each..... \$24 50		Fence—Smooth. An'cal'd Gav'd	
SHOVELS AND SPADES.		Arkansas Hard..... per lb. New Nets		" 2, "..... 22 50		Nos. 6 to 9, less than	
No. 2, Woodford..... per doz. \$5 50		Arkansas Soft..... " "		TUBS, WASH.		car, per 100 lbs..... \$4 25 \$4 95	
No. 182..... 6 00		Lily White..... " "		Standard, Wood, Ex.		Hair—New List..... 40 & 10%	
Ames', new list..... Discount, 12 1/2%		Queer Creek..... " "		Nos. 3 2 1 large		Market.	
Neverbreak, hollow bck, blk..... Nets		Washita..... " "		Per doz. \$9 50 11 25 12 75 15 50		Bright, full bdles.....	
National..... " "		Scythe		Galvanized.		Bright, broken bdles.....	
Buckeye..... " "		Black Diamond..... per gro. New Nets		No..... 1 2 3		Coppered, full bdles.....	
Mohawk..... " "		Crescent..... " "		Per doz..... 13 75 15 95 18 60		Coppered, broken bdles.....	
Bar Drain & Ditching		Green Mountain..... " "		TWINE.		Tinned, full bdles.....	
Iwan's Perfection..... \$30 00		LaMoille..... " "		1-ply Cotton Wrapping.....		Tinned, broken bdles.....	
Railroad, etc.		Extra Quinnebog..... " "		" " " " " "		Picture—In coils..... 80% @ 80 & 10%	
Black Diamond..... per doz. Net		Red End..... " "		India Hemp, 1-lb. balls, No. 18..		In 5-lb. spools..... per lb. 26c	
Crescent..... " "		STOPS, BENCH.		2-ply Jute, 1-lb. balls.....		WRENCHES.	
Keystone..... " "		No. 10 Morrill pattern, per doz. \$10 00		Seins.		Coes Steel Handle, 6 inch..... 30%	
Star..... " "		No. 11 Stearns " " 8 75		Soft..... per lb. Quotation		" " " " 8 "..... 30%	
Hollow Back..... " "		No. 15 Smith " " 6 50		Med..... " " " " " "		" " " " 10 "..... 30%	
Ames', new list..... Discount, 12 1/2%		STOPPERS, FLUE.		Hard..... " " " " " "		" " " " 12 "..... 30%	
Galvanized, with wood han-		Common..... per doz. \$1 10		Staging, 1-lb. ball, size 21.....		Coes Knife-Handle, 6 "..... 30%	
dle, No. 56..... \$1 45		Gem, flat, No. 3..... " 1 00		" " " " 24.....		" " " " 8 "..... 30%	
No. 55..... 1 55		Gem, No. 1..... " 1 10		" " " " 27.....		" " " " 10 "..... 30%	
Alaska Steel.		STOVE PIPE—See pipe.		Bagging, 1-lb ball.....		Coes All Patterns..... 30%	
D-Handle..... per doz. \$3 50		STOVE BOARDS—See Boards.		3-ply, "B" in hanks.....		Bemis & Call's:	
Long Handle..... 3 00		STOVE POLISH—See Polish.		4. " "B" " " " " " "		Adjustable S, 10%; Adjustable S	
SINKS.		STRAPS.		3. " "A" " " " " " "		Pipe, 10%; Briggs' Pattern, 25%	
Cast Iron.		Skis..... per doz. 85c & 1 20		3. " "Silver Finish, in hanks..		Combination Bright..... 10%	
Painted, 16x24..... Net		STRETCHERS.		Fodder or Lath.		Steel Handle Nut..... 25%	
Enameled, White, 16x24.....		Carpet.		130 strand.....		Combination Black..... 25 & 5%	
Wrought Steel.		Bullard's..... per doz. \$3 90		VISES.		Merrick Pattern..... 25 & 5%	
Painted, 16x24.....		Excelsior..... 5 25		No. 21. Hand..... \$5 00		Knife Handle Pattern.	
SLEDGES—See Hammers.		Malleable Iron..... 70		Oval Slide,		No. 62, Screw Wrench, List, plus 5%	
SNAPS, HARNESS.		Perfection..... 6 30		Inches 2 2 1/2 3 3 1/2 4 1/2		No. 60, Steel Handle.	
Covered Spring..... Add 30%		King..... 4 50		Each. \$2.40 \$2.60 \$3.00 \$3.75 \$7.75		WRINGERS.	
Judd's Pattern..... Add 3 1/2% to list		Wire.		No. 1, Genuine Wentworth,		No. 790, Guarantee..... per doz. \$67 00	
SNATHS.		O. S. Elwood, No. 1... per doz. Nets		Noiseless Saw..... per doz. 13 50		No. 770, Bicycle..... " 62 50	
Double Ring, Bush..... per doz. \$9 75		O. S. Elwood, No. 2.. " "		No. 2, Genuine Wentworth,		No. 110, Domestic..... " 55 50	
Patent Loop, Bush..... 10 00		SWIVELS.		Noiseless Saw..... per doz. 20 00		No. 110, Brighton..... " 51 00	
Patent Loop, Grass..... 8 75		Malleable Iron..... per lb. \$0 10		No. 3, Genuine Wentworth,		No. 740, Bicycle..... " 62 50	
SNIPS, TINNERS'.		Wrought Steel..... per gro. 4 50		Noiseless Saw..... per doz. 18 00		No. 22, Domestic..... " 55 50	
Clover Leaf..... 40 & 10%		TACKS.		No. 500, All Steel Folding Saw		No. 22, Pioneer..... " 51 00	
National..... 40 & 10%		Bill Posters' 6-oz., 25 lb. boxes,		per doz. 13 50		No. 770B, Bicycle..... " 101 00	
Star..... 50%		per lb..... 15c		Upholsters' 6-oz., 25-lb. boxes,		No. 781B Guarantee..... " 111 00	
SOLDER—See Metals.		per lb..... 15 1/2c		SPRINKLERS, LAWN.			
SPRINGS, DOOR.		SPRINKLERS, LAWN.		No. 1..... per doz. \$9 75			
Perfect.							
No..... 2 3 4 5 6 7							
Per doz. .55c 60c 65c 75c 90c 1 00							
Reliance.							
Light Medium Heavy							
Per doz. \$1 55 2 10 3 20							
Torrey's..... per doz. 1 65							
SPRINKLERS, LAWN.							
No. 1..... per doz. \$9 75							

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Berger Bros. Co.	Philadelphia, Pa.
Burton Co., W. J.	Detroit, Mich.
Clark-Smith Hardware Co.	Peoria, Ill.
Milwaukee Corrugating Co.	Milwaukee, Wis.
Whitaker-Glessner Co.	Wheeling, W. Va.

Elbows and Conductor Shoes.
Lupton's Sons Co., David,
Philadelphia, Pa.

Elevators.

Kimball Bros. Co.,
Council Bluffs, Iowa

Fence Gates.

American Steel & Wire Co.,
Chicago, Ill.
Pittsburgh Steel Co.,
Pittsburgh, Pa.

Fencing—Wire.

Pittsburgh Steel Co.,
Pittsburgh, Pa.

Files.

Delta File Wks., Philadelphia, Pa.
Disston & Sons, Inc., Henry,
Philadelphia, Pa.
Heller Bros. Co., Newark, N. J.
Nicholson File Co.,
Providence, Rhode Island.

Flux—Aluminum.

Roesch, Geo. E., Aurora, Ill.

Flux—Soldering.

Allen Co., Inc., L. B., Chicago, Ill.

Furnaces—Soldering.

Ashton Mfg. Co., Newark, N. J.
Berns, Otto, Newark, N. J.
Burgess Soldering Furnace Co.,
Columbus, Ohio
Clayton & Lambert Mfg. Co.,
Detroit, Mich.
Turner Brass Works,
Sycamore, Ill.

Hammers.

Vaughan & Bushnell Mfg. Co.,
Chicago, Ill.

Handles—Boiler.

Berger Bros. Co.,
Philadelphia, Pa.

Hangers—Eaves Trough.

Abbott Mfg. Co.,
Cleveland, Ohio

Heaters—School Room.

Monroe Fdy. & Furnace Co.,
Monroe, Mich.
Peerless Foundry Co.,
Indianapolis, Ind.
Standard Furnace & Supply Co.,
Omaha, Neb.

Heaters—Warm Air.

Danville Stove & Mfg. Co.,
Danville, Pa.
Hall-Neal Furnace Co.,
Indianapolis, Ind.
Henry Furnace & Fdy. Co.,
Cleveland, Ohio
Hess-Snyder Co., Massillon, Ohio
Mahoning Foundry Co.,
Youngstown, Ohio
May-Fiebeger Furnace Co.,
Newark, Ohio
Meyer Furnace Co., Peoria, Ill.
Monroe Fdy. & Furnace Co.,
Monroe, Mich.
Peerless Foundry Co.,
Indianapolis, Ind.
Rudy Furnace Co.,
Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio
Schelble-Moncrief Heater Co.,
Cleveland, Ohio
Schill Bros. Co., Crestline, Ohio
Schwab & Sons Co., R. J.,
Milwaukee, Wis.
Standard Furnace & Supply Co.,
Omaha, Neb.
Tubular Heating & Ventilating
Co., Philadelphia, Pa.
XXth Century Heating & Ventila-
ting Co., Akron, Ohio
Victor Stove Co., Salem, Ohio

Horse Shoes.

American Steel & Wire Co.,
Chicago, Ill.

Jobbers—Hardware.

Bullard & Gormley Co.,
Chicago, Ill.
Clark-Smith Hdw. Co.,
Peoria, Ill.

Lath—Expanded Metal.
Milwaukee Corrugating Co.,
Milwaukee, Wis.

Machinery—Culvert.

Bertsch & Co.,
Cambridge City, Ind.

Machines—Crimping.

Bertsch & Co.,
Cambridge City, Ind.
Niagara Machine & Tool Wks.,
Buffalo, N. Y.

Machines—Razor Blades.

Hyfield Mfg. Co.,
New York, N. Y.

Machines—Stove Pipe.

Hemp & Co., St. Louis, Mo.

Machines—Tinsmith.

Bertsch & Co.,
Cambridge City, Ind.
Dreis & Krump Mfg. Co.,
Chicago, Ill.
Hemp & Co., St. Louis, Mo.
Knoedler, Frederick J.,
Philadelphia, Pa.
Niagara Machine & Tool Wks.,
Buffalo, N. Y.

Metal—Babbitt.

Merchant & Evans Co.,
Philadelphia, Pa.

Metals—Perforated.

Harrington & King Perforating
Co., Chicago, Ill.

Millboard.

Jack Corporation, A. W.,
Lockport, N. Y.

Mitters.

Friedley-Voshardt Co.,
Chicago, Ill.

Nails—Slatting.

Hussey & Co., C. G.,
Pittsburgh, Pa.

Nails—Wire.

American Steel & Wire Co.,
Chicago, Ill.
Pittsburgh Steel Co.,
Pittsburgh, Pa.

Ornaments—Sheet Metal.

Friedley-Voshardt Co.,
Chicago, Ill.

Pails—Dairy.

Rochester Can Co.,
Rochester, N. Y.

Patterns—Stove.

Cleveland Castings Pattern Co.,
Cleveland, Ohio
Cope-Swift Co., Inc.,
Detroit, Mich.
Quincy Pattern Co., Quincy, Ill.
Vedder Pattern Works,
Troy, N. Y.

Pipes and Fittings—Furnace.

Henry Furnace & Fdy. Co.,
Cleveland, Ohio
Meyer & Bro. Co., F., Peoria, Ill.
Michigan Safety Furnace Pipe
Co., Detroit, Mich.
Safety Interlocking Stove Pipe
Co., Mt. Pleasant, Iowa
Standard Furnace & Supply Co.,
Omaha, Neb.
Stearns Register Co.,
Detroit, Mich.

Pipe and Fittings—Stove.

Hemp & Co., St. Louis, Mo.
Meyer & Bro. Co., F., Peoria, Ill.
Michigan Safety Furnace Pipe
Co., Detroit, Mich.
Safety Interlocking Stove Pipe
Co., Mt. Pleasant, Iowa
Sullivan-Gelger Co.,
Indianapolis, Ind.
Whitaker-Glessner Co.,
Wheeling, W. Va.